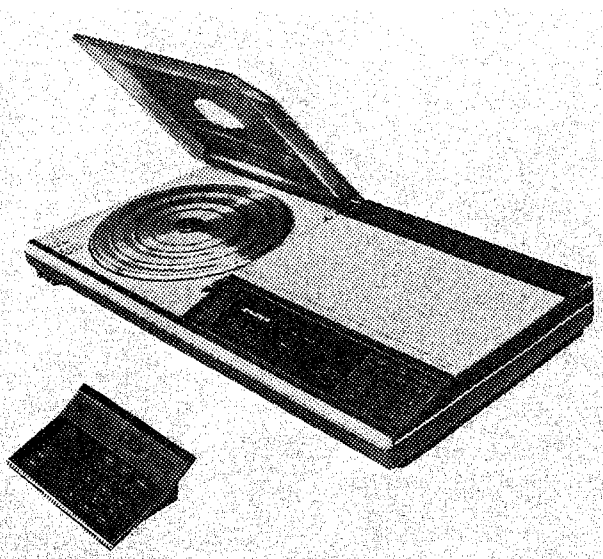
Bang&Olufsen



Beocenter 7700

Type 1811

SERVICE MANUAL

CONTENTS

	Section
Operating survey, circuit diagrams and PC boards	1
Survey of transistors, IC's and diodes	2
Electrical parts list	3
Mechanical parts list	4
Adjustment, radio section	5
Adjustment, tape recorder	6
Adjustment, record player	7
Technical data	8
Dismantle	9
Service tips (wow frequencies) and modifications	10
Insulation test	11
Final test	12

N.B. The system for coding of connections in the diagrams is new in relation to previous Bang & Olufsen systems, see pages 1-2.

3 Power Supply and Output Ampl. ..... diagr. B

4 Power Supply ..... diagr. B

11 Tape ..... diagr. E

13 Mains Transformer ..... diagr. B

17 Phono ..... diagr. F

18 Phono Keyboard ..... diagr. F

22 FM Preset ..... diagr. A

23 AM ..... diagr. A-B

24 Switch Section ..... diagr. A-B-E

25 Record Level ..... diagr. B

41 Display ..... diagr. C

42 Microcomputer ..... diagr. C

43 Volume and Tone Control ..... diagr. B

44 Power Back Up and Mic. Ampl. ..... diagr. C-D

45 Remote ..... diagr. D

46 Socket Panel ..... diagr. A-B

47 FM ..... diagr. A

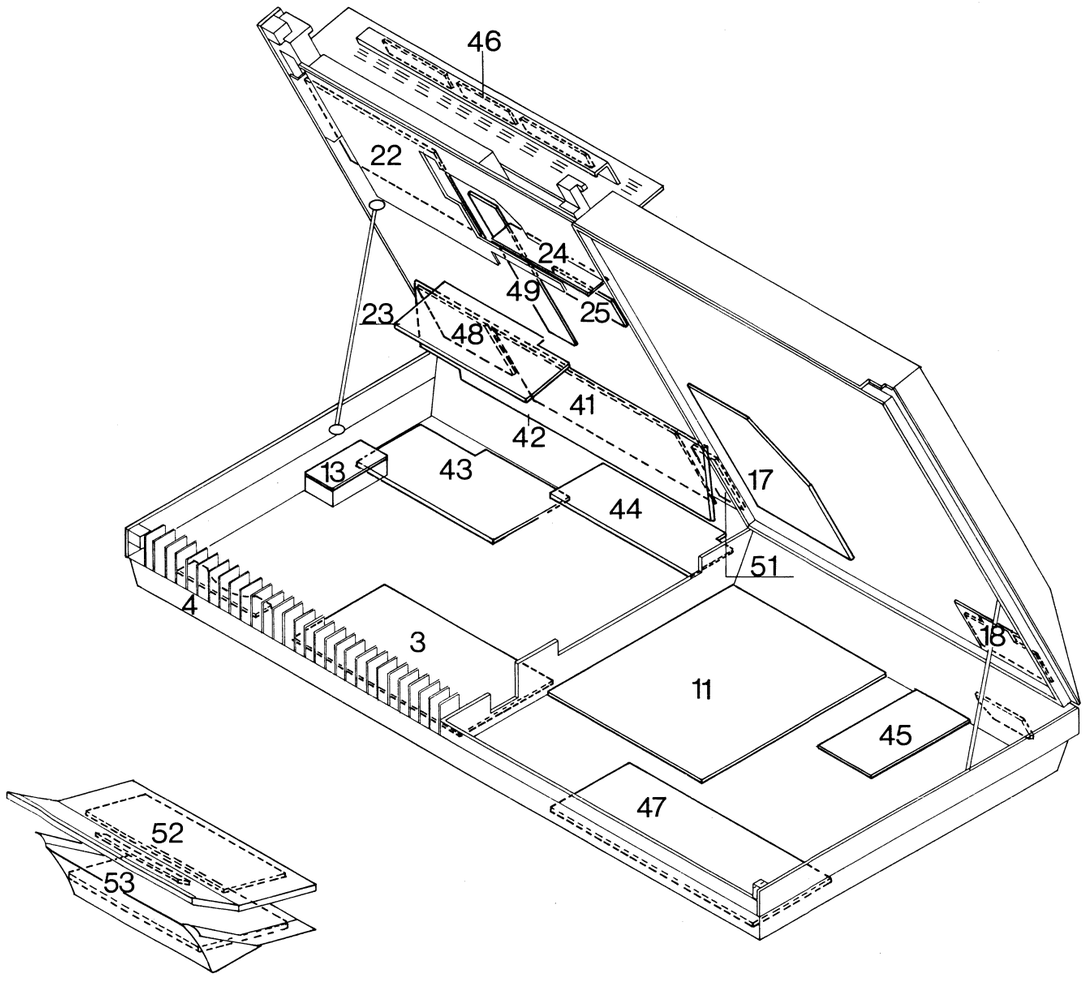
48 Primary Keyboard ..... diagr. C

49 Secondary Keyboard ..... diagr. C

51 Volume Keyboard ..... diagr. C

52 Master Control Panel Keyboard ..... diagr. D

53 Master Control Panel ..... diagr. D



Beocenter 7700
Type 1811

DIAGRAM EXPLANATION

The individual diagram pages are marked with a letter, e.g. DIAGRAM A.

Type numbers of transistors and ICs (e.g. TR30/BC557B) have been indicated on the diagram in those cases where the type number is unambiguous for the position of the component in a circuitry. If the position number is followed by an asterisk (e.g. TR101*), the spare parts number **must be used** because this component has been especially selected.

Control Circuit

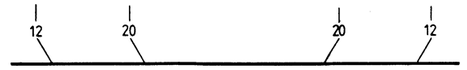
In certain control circuits the active mode has been indicated by means of a letter symbol (Cr = HIGH with CrO_2 tapes). If the symbol has a negation superscript bar the active mode is LOW ($\overline{Cr}$ = LOW with CrO_2 tapes).

The arrow indications on the microcomputer pins indicate whether the pins in question are an input or an output.

WIRING CONNECTIONS

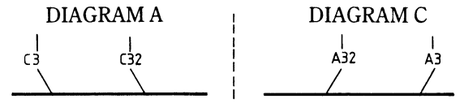
The wiring connections on the diagram are assembled in »bundles«. The individual wires are coded to indicate to where they are leading.

INTERNAL CONNECTION ON ONE DIAGRAM PAGE



Internal connections on a diagram page are indicated by a number. The bend of the wire indicates in which direction the other end of the wire may be found.

CONNECTION TO ANOTHER DIAGRAM PAGE



Connections to another diagram page are indicated by a number, as well as by a letter indication of the diagram to which the connections lead.

GROUND SYMBOLS

Three different ground symbols are used in the set.

= ground (motors, display, magnet coils, etc.)

= signal ground

= chassis

TP0

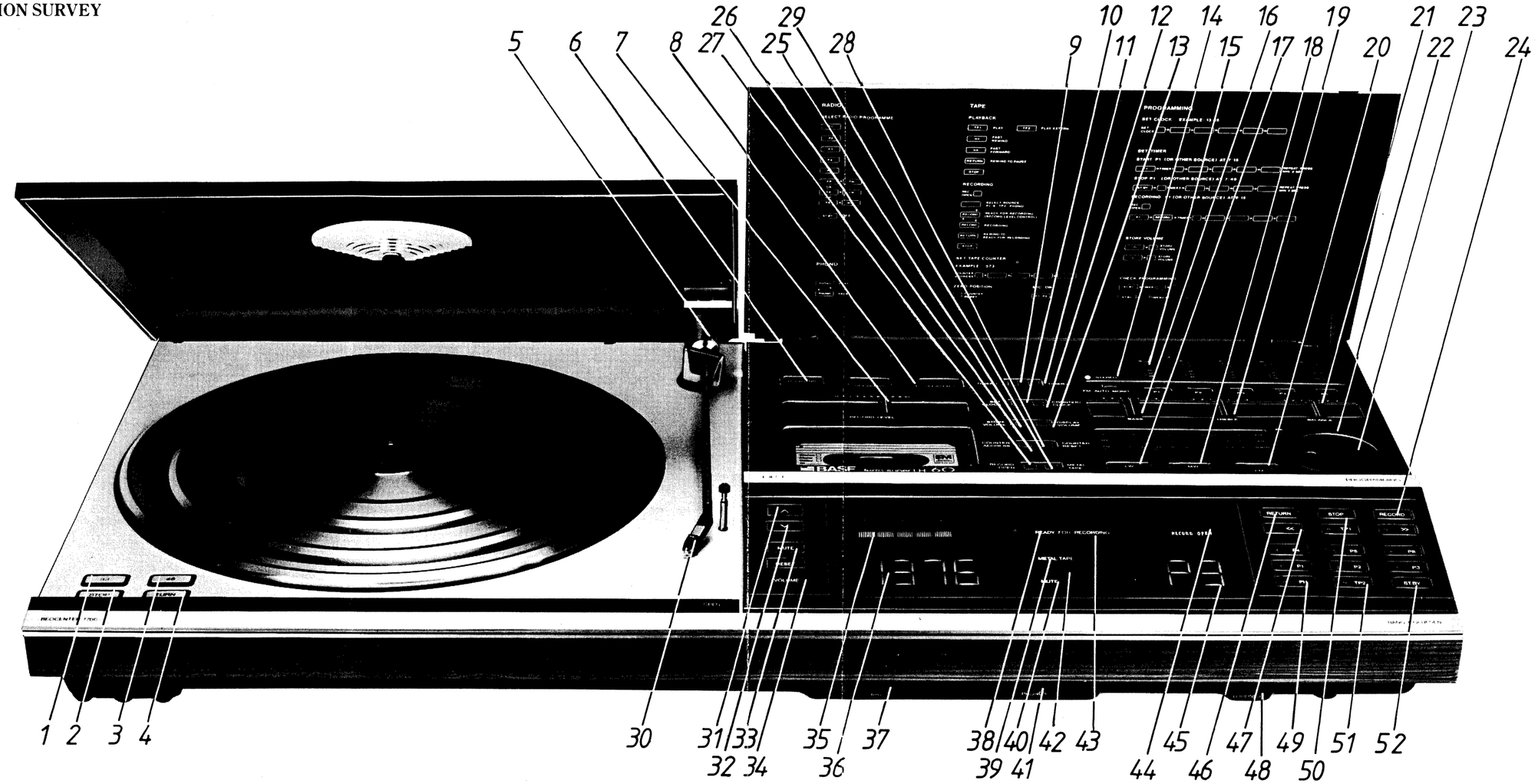
In the power supply on PC3 is stated a ground test point TP0. In this and only in this test point , and are connected to each other.
TP0 may therefore be used as reference for both DC measurings and signals measurings in the set. However, in connection with fault finding on the various modules the ground of the module in question should always be used as reference.
TP0 is used as reference at measurings of DC voltages from the power supply (PC3-4).

CO-ORDINATE NUMBERS

The biggest PC boards are provided with co-ordinate systems. The components on these PC boards are provided with a co-ordinate number on the diagram (smaller printing type than the position numbers) indicating in which co-ordinate they are placed on the PC board.
The co-ordinate numbers for the left channel of the output amplifier are stated in brackets in the diagram for right channel.

Measuring conditions and explanation of the pin designation on 42IC7 see page 1-14.

OPERATION SURVEY



1. 33 – manual selection of 33 r.p.m.
2. STOP – manual stopping of Record Player.
3. 45 – manual selection of 45 r.p.m.
4. TURN – starting of turntable without moving of pickup arm.
5. Counter-balance weight.
6. Dolby NR switch.
7. SPEAKER 1 and 2 – loudspeaker switch.
8. RECORD LEVEL – recording volume.
9. TIMER 1 – starting of time programming.
10. SET CLOCK – start for pre-setting of clock.
11. TIMER 2 – starting of time programming.
12. COUNTER/CLOCK – switching tape counter or clock.
13. DISPLAY VOLUME – control of volume.
14. FM AUTO/MONO – switch for FM automatic and FM mono.
15. Pre-setting FM Program 1.
16. BASS – bass control.
17. LW – long wave Program 6.
18. MW – medium wave Program 6.
19. TREBLE – treble control.
20. FM – FM Program 6.
21. BALANCE – balancing LH and RH channels.
22. FM – balance light indicator.
23. Turning button Program 6.
24. RECORD – start of recording.
25. STORE VOLUME – programming of starting volume.
26. COUNTER ADDRESS – automatic cueing on tape.
27. RECORD OPEN – acceptance for recording.
28. COUNTER RESET – zeroing of counter.
29. METAL TAPE – recording on metal tape.
30. Pick-up unit.
31. ∧ – stronger sound.
32. ∨ – weaker sound.
33. MUTE – sound OFF/ON.
34. RESET – return to programmed sound volume.
35. Peak Program Meter – recording level indicator.
36. Digital Display for clock, tape counter and sound volume.
37. MIC – socket for microphone.
38. READY FOR – light indicator, ready for recording.
39. METAL TAPE – light indicator.
40. MUTE – light indicator.
41. PHONES – socket for headphones.
42. PROGRAMMED – light indicator for time programming.
43. RECORDING – recording in progress.
44. RECORD OPEN – light indicator.
45. P1 – program indicator.
46. RETURN – return to starting point of recording and playback.
47. P1 to P6, selection of program and time programming (see 9, 10, 11).
48. LOUDNESS – switch.
49. PH – starting of record player.
50. STOP – tape recorder.
51. TP2 – playback of extra tape recorder.
52. ST. BY – stand-by switch.

BLOCK DIAGRAM OF
SIGNAL PROCESSING

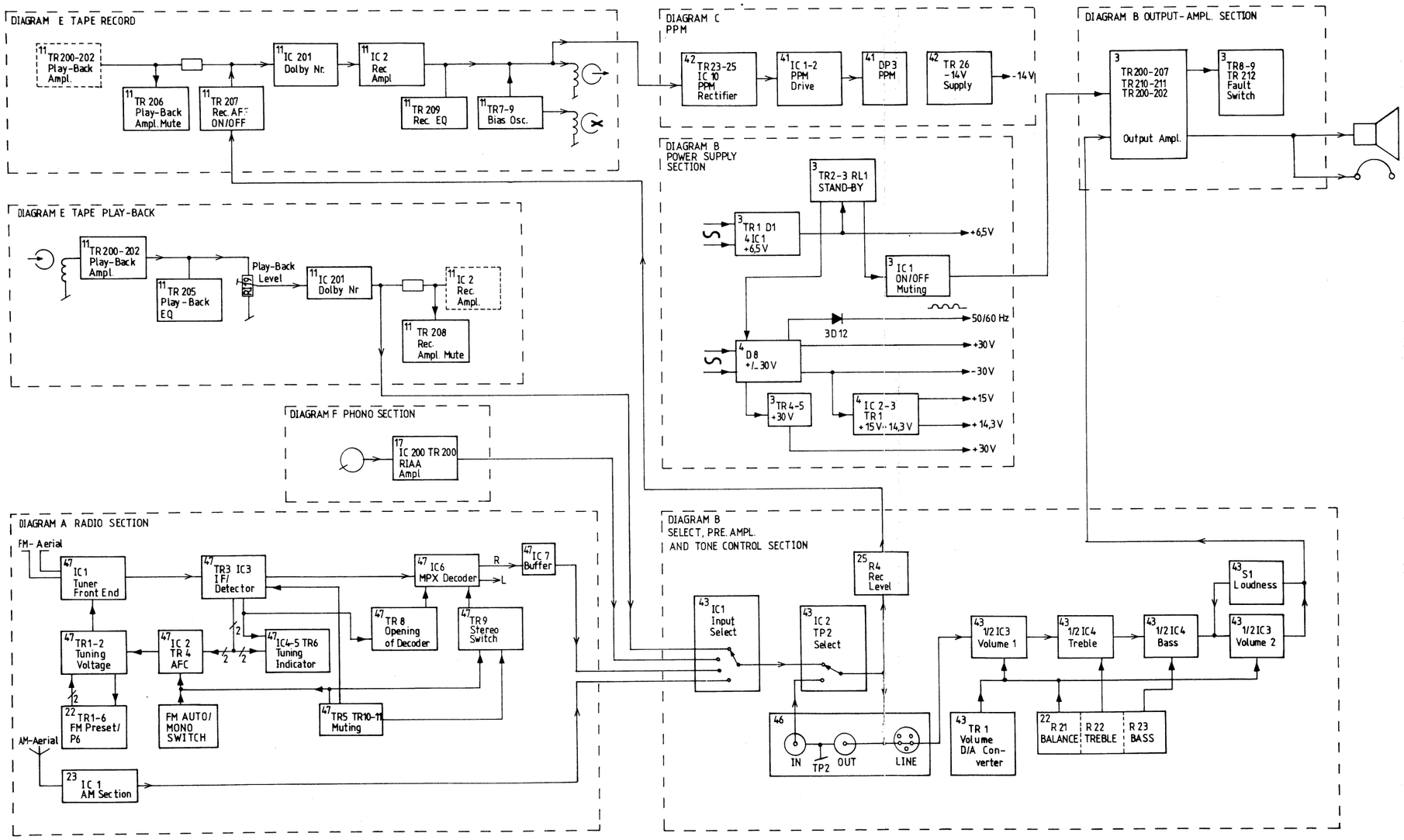


DIAGRAM A
22Module
FM Preset
23Module
AM Section
P6 Tuning
47Module
FM Section

DIAGRAM B
03Module
Power Supply
Muting
Stand By
Power Amplifier
04Module
Power Supply
22Module
Potentiometers
24Module
Loudspeaker Switches
25 Module
Record Level
43 Module
Input Select
Volume Control
Tone Control
44Modul
Headphone Socket
46Module
Socket Panel

DIAGRAM E
11-12Module
Tape Recorder

DIAGRAM F
15-17-18Module
Phono Section

BLOCK DIAGRAM OF THE OPERATING SYSTEM

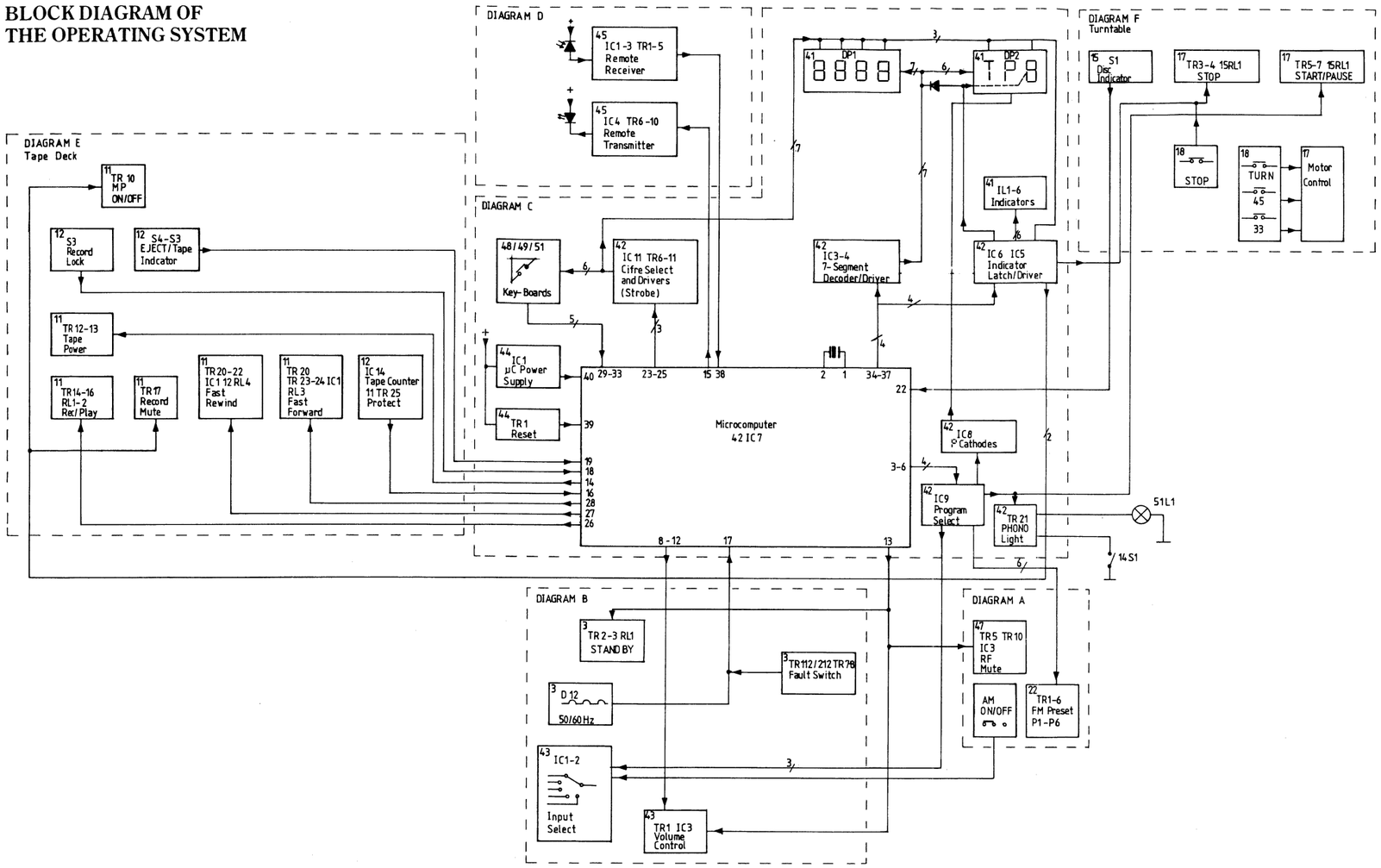


DIAGRAM D
45 IC1-3 TR1-5 Remote Receiver
45 IC4 TR6-10 Remote Transmitter
41 DP1
41 DP2
DIAGRAM F Turntable
15 S1 Disc Indicator
17 TR3-4 15RL1 STOP
17 TR5-7 15RL1 START/PAUSE
18 STOP
18 TURN 45 33
17 Motor Control
DIAGRAM E Tape Deck
11 TR 10 MP ON/OFF
12 S3 Record Lock
12 S4-S3 EJECT/Tape Indcator
11 TR 12-13 Tape Power
11 TR14-16 RL1-2 Rec/Play
11 TR 17 Record Mute
11 TR 20-22 IC1 12 RL4 Fast Rewind
11 TR 20 TR 23-24 IC1 RL3 Fast Forward
12 IC 14 Tape Counter 11 TR 25 Protect
DIAGRAM C
48/49/51 Key-Boards
42 IC 11 TR6-11 Cifre Select and Drivers (Strobe)
42 IC3-4 7-Segment Decoder/Driver
41 IL1-6 Indicators
42 IC 6 IC5 Indicator Latch/Driver
44 IC1 µC Power Supply
44 TR1 Reset
Microcomputer 42 IC7
42 IC8 P Cathodes
42 IC9 Program Select
42 TR 21 PHONO Light
51L1
14S1
DIAGRAM B
3 TR2-3 RL1 STAND BY
3 TR112/212 TR78 Fault Switch
3 D12 50/60 Hz
43 IC1-2 Input Select
43 TR1 IC3 Volume Control
DIAGRAM A
47 TR5 TR10 IC3 RF Mute
AM ON/OFF
22 TR1-6 FM Preset P1-P6

DIAGRAM C
41Module
Display
PPM (Peak Program Meter)
Indicators
42Module
Microcomputer (µC)
Display/keyboard Strobe Driver
7 Segment Decoder/Driver
Indicator Latch/Driver
5V Power Supply
PPM Rectifier
44Module
µC Supply/Back-up
Reset
48Module
Primary Key-board
49Module
Secondary Key-board
51Module
Volume Key-board

FUNCTION TABLES FOR DIAGRAM C

FUNCTION TABLE FOR MICROCOMPUTER 42IC7

CONDITIONS					FUNCTION	RESULTS							
PIN 16	18	19	22	39		3	4	5	6	13	14	26	27	28
			0	1	PHONO	0	0	0	0	1	1		1	1
				1	P 1	1	0	0	0	1	1		1	1
				1	P 2	0	1	0	0	1	1		1	1
				1	P 3	1	1	0	0	1	1		1	1
				1	P 4	0	0	1	0	1	1		1	1
				1	P 5	1	0	1	0	1	1		1	1
				1	P 6	0	1	1	0	1	1		1	1
				1	ST.BY.	1	1	1	0	0	1		1	1
⎍⎍		0		1	TAPE 1	0	0	0	1	1	0*	0	0	0
				1	TAPE 2	1	0	0	1	1	1		1	1
	1	0		1	REC. OPEN									
		0		1	COUNTER ADDR.						0		1	1
		0		1	P1-REC. PAUSE	1	0	0	0	1	0	1	1	1
⎍⎍		0		1	P1-REC.	1	0	0	0	1	0	1	0	0
⎍⎍		0		1	≫					0	0	0	1	0
⎍⎍		0		1	≪					0	0	0	0	1

*PIN 14 is low for 5 min. when activating another program from a TP1 function.

DISPLAY VOLUME	42IC7 PIN 12	11	10	9	8
MUTE	0	0	0	0	0
0:0	0	0	0	0	1
0:2	0	0	0	1	0
0:4	0	0	0	1	1
0:6	0	0	1	0	0
0:8	0	0	1	0	1
5:2	1	1	0	1	1
5:4	1	1	1	0	0
5:6	1	1	1	0	1
5:8	1	1	1	1	0
6:0	1	1	1	1	1

FUNCTION TABLE 42IC3 [SN74LS248]

DECIMAL ON DISPLAY	INPUTS D	C	B	A	OUTPUTS a	b	c	d	e	f	g
0	0	0	0	0	1	1	1	1	1	1	0
1	0	0	0	1	0	1	1	0	0	0	0
2	0	0	1	0	1	1	0	1	1	0	1
3	0	0	1	1	1	1	1	1	0	0	1
4	0	1	0	0	0	1	1	0	0	1	1
5	0	1	0	1	1	0	1	1	0	1	1
6	0	1	1	0	1	0	1	1	1	1	1
7	0	1	1	1	1	1	1	0	0	0	0
8	1	0	0	0	1	1	1	1	1	1	1
9	1	0	0	1	1	1	1	1	0	1	1
C	1	0	1	0	0	0	0	1	1	0	1
J	1	0	1	1	0	0	1	1	0	0	1
U	1	1	0	0	0	1	0	0	0	1	1
OFF	1	1	1	1	0	0	0	0	0	0	0

FUNCTION TABLE 42IC6

ADDRESS INPUT PINS 3	2	1	LEVEL AT "DATA IN" IS TRANSFERED TO ADDRESSED OUTPUT:
0	0	0	PIN 4
0	0	1	PIN 5
0	1	0	PIN 6
0	1	1	PIN 7
1	0	0	PIN 9
1	0	1	PIN 10
1	1	0	PIN 11
1	1	1	PIN 12

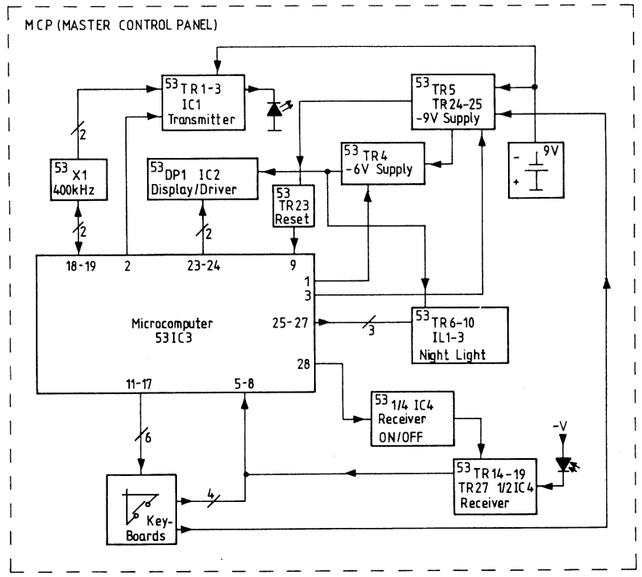
PIN 14 (ENABLE) = LOW;
DATA IN (PIN 13) is transfered to addressed output pin.

PIN 14 (ENABLE) = HIGH;
DATA IN (PIN 13) is not transfered to addressed output pin.
Output pins are hold in previous level.

FUNCTION TABLE 42IC9 [SN7445]

FUNCTION	INPUTS D	C	B	A	OUTPUT AT PINS 1	2	3	4	5	6	7	9	10	11
PHONO	0	0	0	0	0	1	1	1	1	1	1	1	1	1
P1	0	0	0	1	1	0	1	1	1	1	1	1	1	1
P2	0	0	1	0	1	1	0	1	1	1	1	1	1	1
P3	0	0	1	1	1	1	1	0	1	1	1	1	1	1
P4	0	1	0	0	1	1	1	1	0	1	1	1	1	1
P5	0	1	0	1	1	1	1	1	1	0	1	1	1	1
P6	0	1	1	0	1	1	1	1	1	1	0	1	1	1
ST. BY.	0	1	1	1	1	1	1	1	1	1	1	0	1	1
TAPE 1	1	0	0	0	1	1	1	1	1	1	1	1	0	1
TAPE 2	1	0	0	1	1	1	1	1	1	1	1	1	1	0

BLOCK DIAGRAM OF REMOTE SYSTEM DIAGRAM D



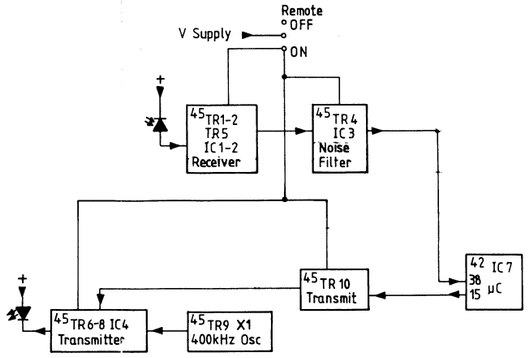
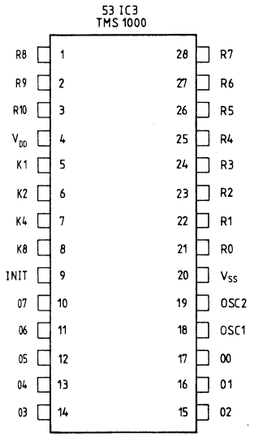
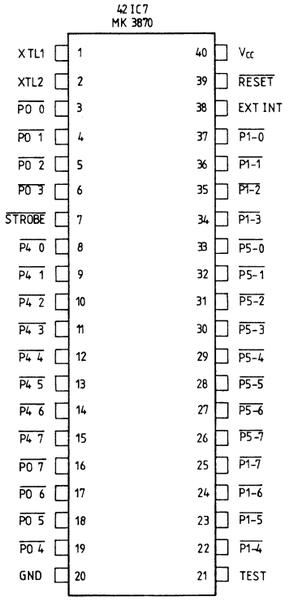


DIAGRAM D
44Module
Mic. Amplifier
45Module
IR Receiver
IR Transmitter
53Module (Master Control Panel)
Microcomputer
IR Receiver
IR Transmitter
LCD Display
LCD Decoder/Driver
Power Supply
Reset
Night Light
52Module
Key-board

PIN CONFIGURATIONS OF MICROCOMPUTERS

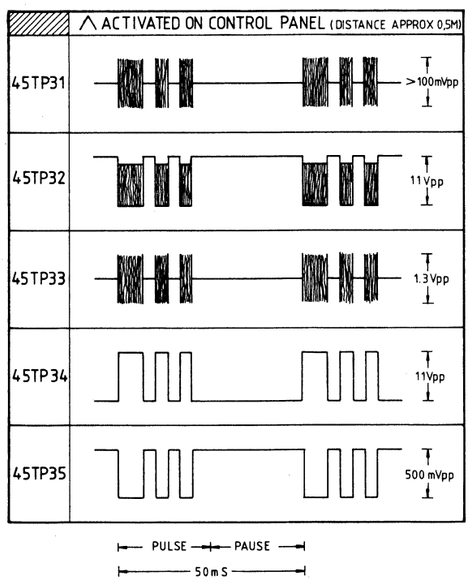




FUNCTION TABLES FOR DIAGRAM D

FUNCTION	53TP47 START							
P1	1	0	1	0	1	0	0	0
P2	1	0	1	0	0	1	0	0
P3	1	0	1	0	0	0	1	0
P4	1	0	1	1	1	0	0	0
P5	1	0	1	1	0	1	0	0
P6	1	0	1	1	0	0	1	0
PH	1	0	0	1	1	0	0	0
TP1	1	0	0	1	0	1	0	0
TP2	1	0	1	0	1	0	1	0
≪	1	1	0	0	1	0	0	0
≫	1	1	0	0	0	1	0	0
STOP	1	0	0	0	1	0	1	0
RETURN	1	1	0	0	1	0	1	0
RECORD	1	1	0	0	0	0	1	0
∧	1	1	0	1	0	0	1	0
∨	1	1	0	1	0	1	0	0
RESET	1	1	0	1	1	0	1	0
MUTE	1	0	0	1	1	0	1	0
STATUS	1	0	1	1	1	0	1	0
ST.BY.	1	0	0	1	0	0	1	0

ANSWER TO MCP	45TP40 START				DATA				STOP			
PH	1	1	0	1	0	0	0	0	1	0	0	0
P1					0	0	0	1				
P2					0	0	1	0				
P3					0	0	1	1				
P4					0	1	0	0				
P5					0	1	0	1				
P6					0	1	1	0				
□	—II—				0	1	1	1	—II—			
TP1					1	0	0	0				
TP2					1	0	0	1				
≪					1	0	1	0				
≫					1	0	1	1				
RECORD					1	1	0	0				
RECORD PAUSE					1	1	0	1				
MUTE					1	1	1	0				
RECORD MUTE					1	1	1	1				



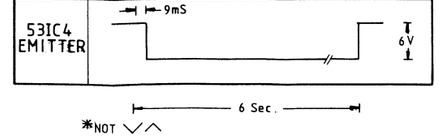


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DIAGRAM A

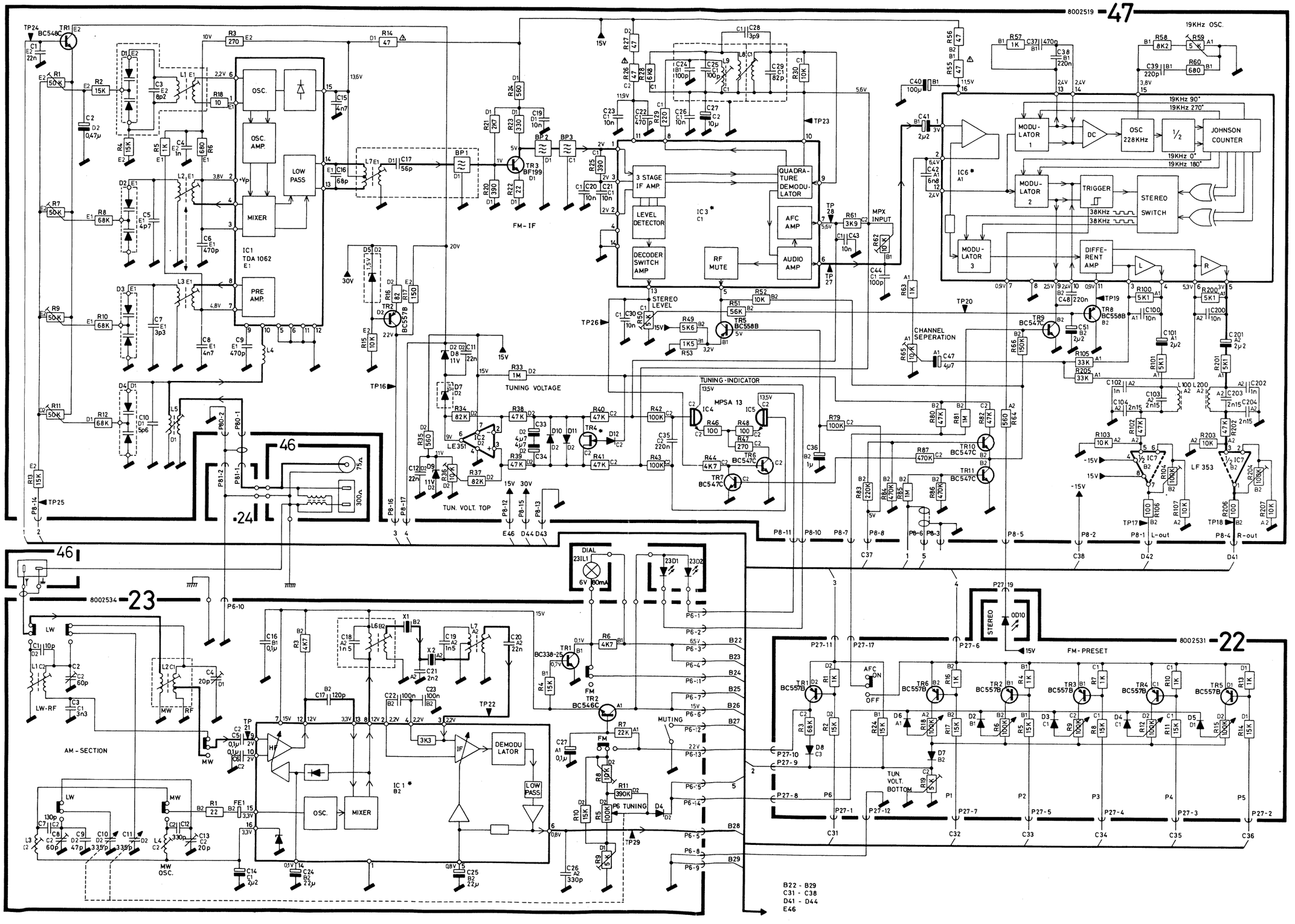


DIAGRAM B

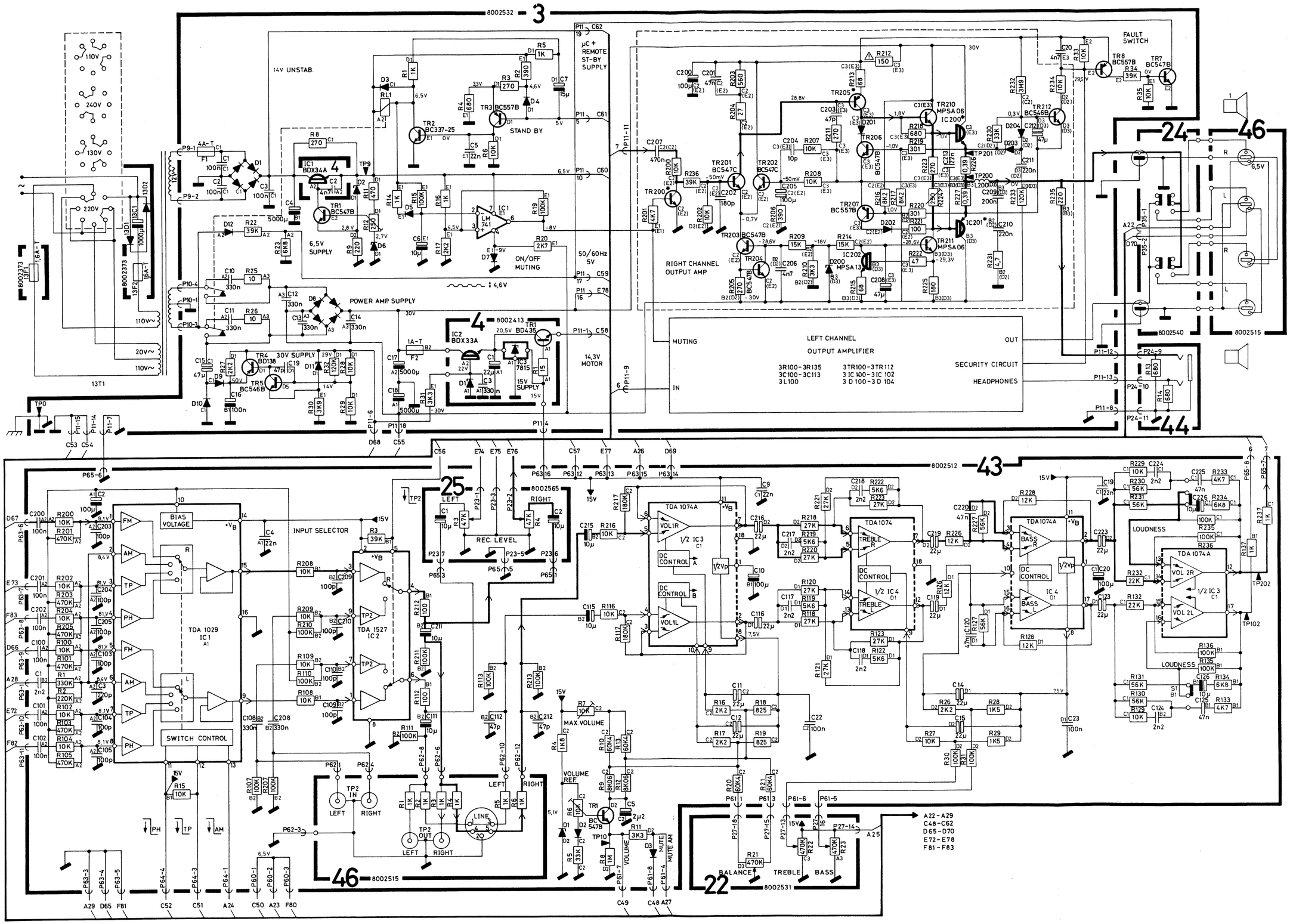

14V UNSTAB.
6,5V SUPPLY
ON/OFF MUTING
STAND BY
µC + REMOTE ST-BY SUPPLY
50/60Hz 5V
POWER AMP SUPPLY
30V SUPPLY
15V SUPPLY
14,3V MOTOR
RIGHT CHANNEL OUTPUT AMP
LEFT CHANNEL OUTPUT AMPLIFIER
3R100-3R135
3C100-3C113
3L100
3TR100-3TR112
3 IC 100-3IC 102
3 D 100-3 D 104
MUTING
IN
OUT
SECURITY CIRCUIT
HEADPHONES
FAULT SWITCH
TDA 1029 IC1
TDA 1527 IC2
BIAS VOLTAGE
INPUT SELECTOR
SWITCH CONTROL
REC. LEVEL
MAX.VOLUME
VOLUME REF.
TDA 1074A
DC CONTROL
LOUDNESS
BALANCE
TREBLE
BASS
VOLUME
MUTE AM
110V
220V
240V
130V
13T1
110V~
20V~
110V~
8002532
8002565
8002512
8002531
8002515
8002540
8002413
8002373

DIAGRAM C

PIN	ASSIGNMENT 41DP1	PIN	ASSIGNMENT 41DP2	
1	COMMON CATHODE (DOTS)	1	COMMON ANODE	DIGIT T
2	COLON LOWER ANODE	2	SEG A CATHODE	"
3	COLON UPPER ANODE	3	SEG B CATHODE	"
4	NO CONNECTION	4	SEG C CATHODE	"
5	DIGIT 4 ANODE	5	COMMON ANODE	DIGIT P
6	DIGIT 3 ANODE	6	SEG E CATHODE	"
7	DIGIT 2 ANODE	7	SEG F CATHODE	"
8	DIGIT 1 ANODE	8	SEG A CATHODE	"
9	SEG C CATHODE	9	SEG G CATHODE	"
10	SEG G "	10	SEG B CATHODE	"
11	SEG D "	11	SEG A CATHODE	DIGIT 5
12	SEG E "	12	SEG F CATHODE	"
13	SEG F "	13	SEG E CATHODE	"
14	SEG A "	14	COMMON ANODE	"
15	SEG B "	15	SEG D CATHODE	"
		16	SEG C CATHODE	"
		17	SEG G CATHODE	"
		18	SEG B CATHODE	"

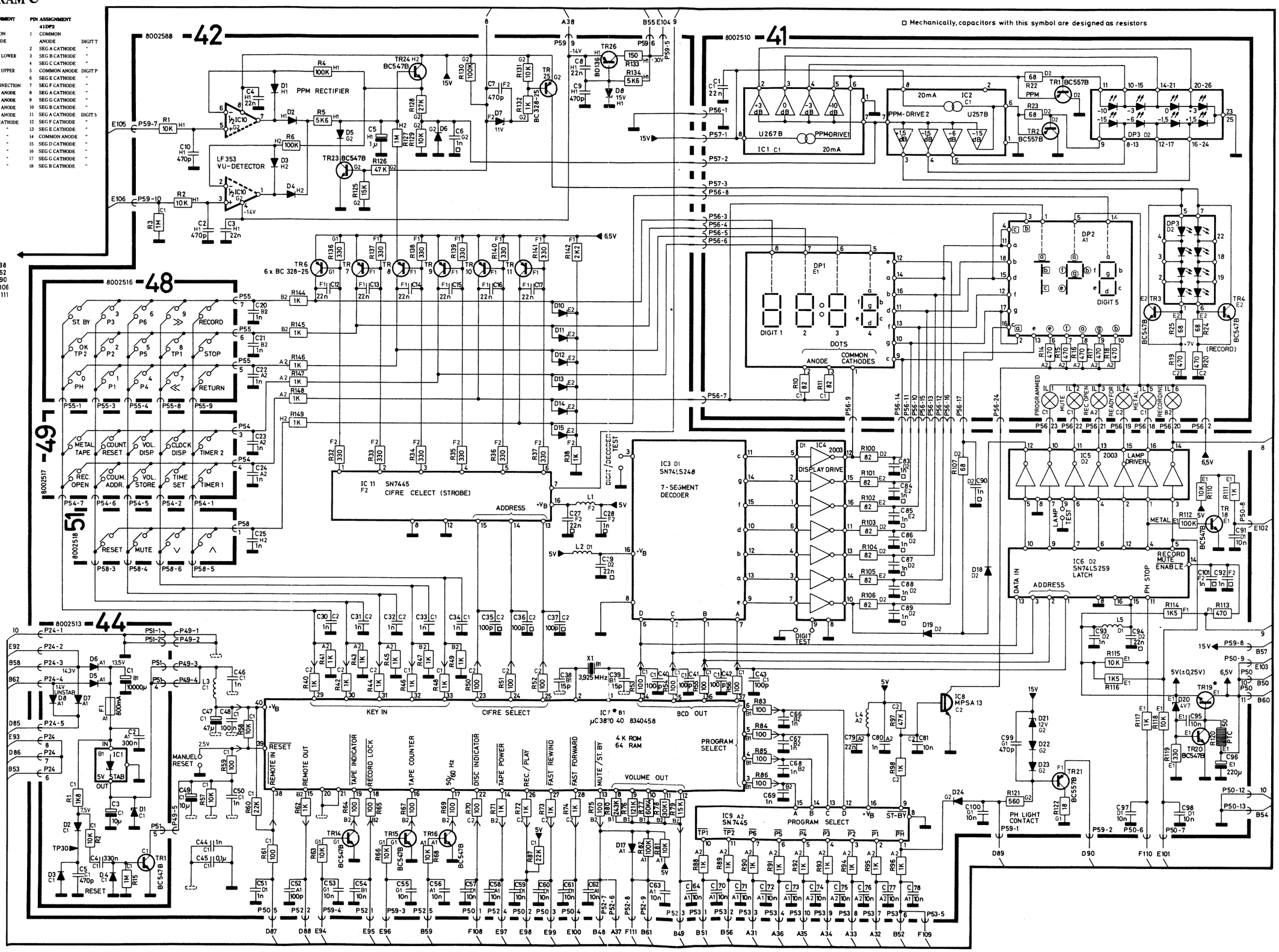
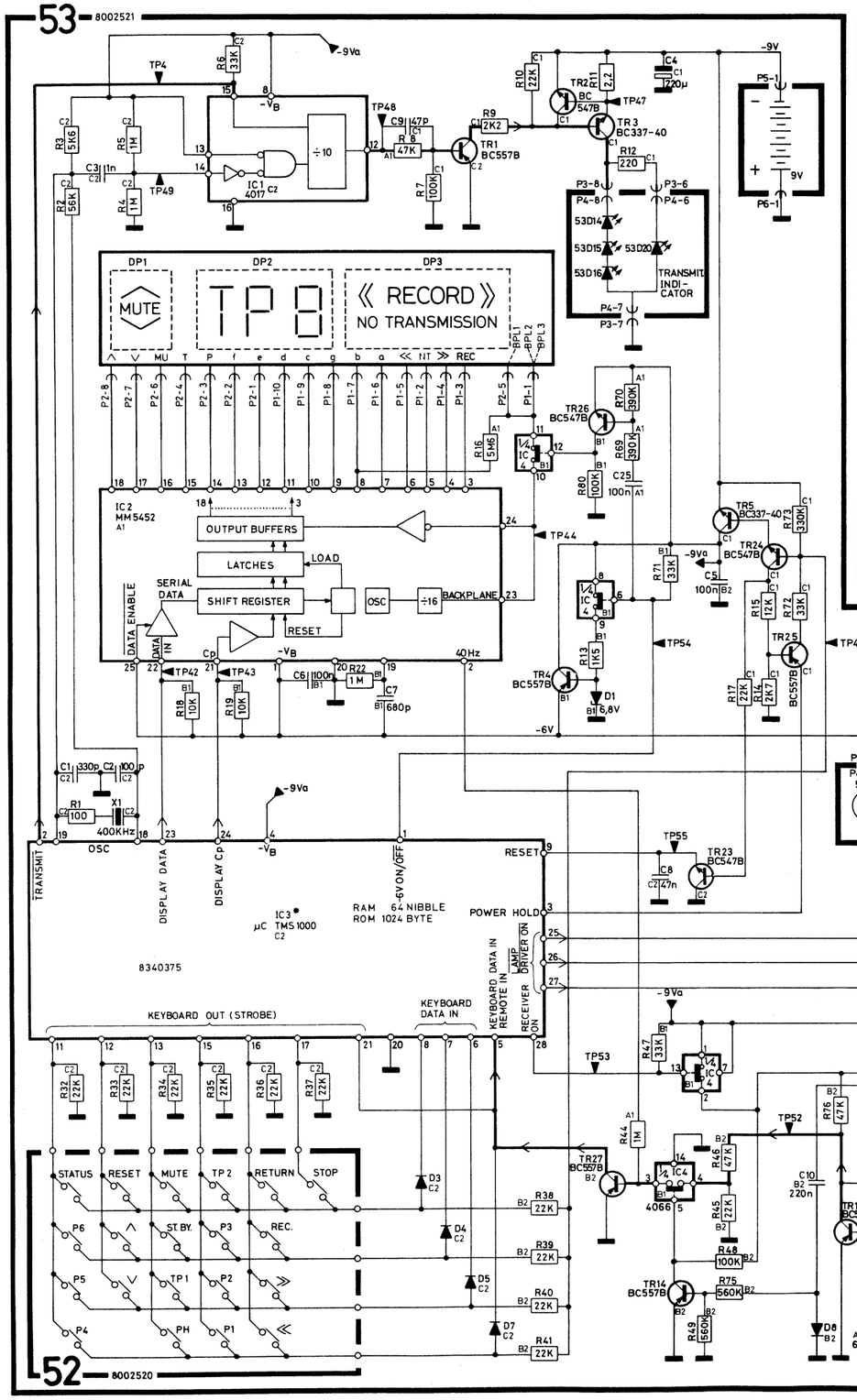
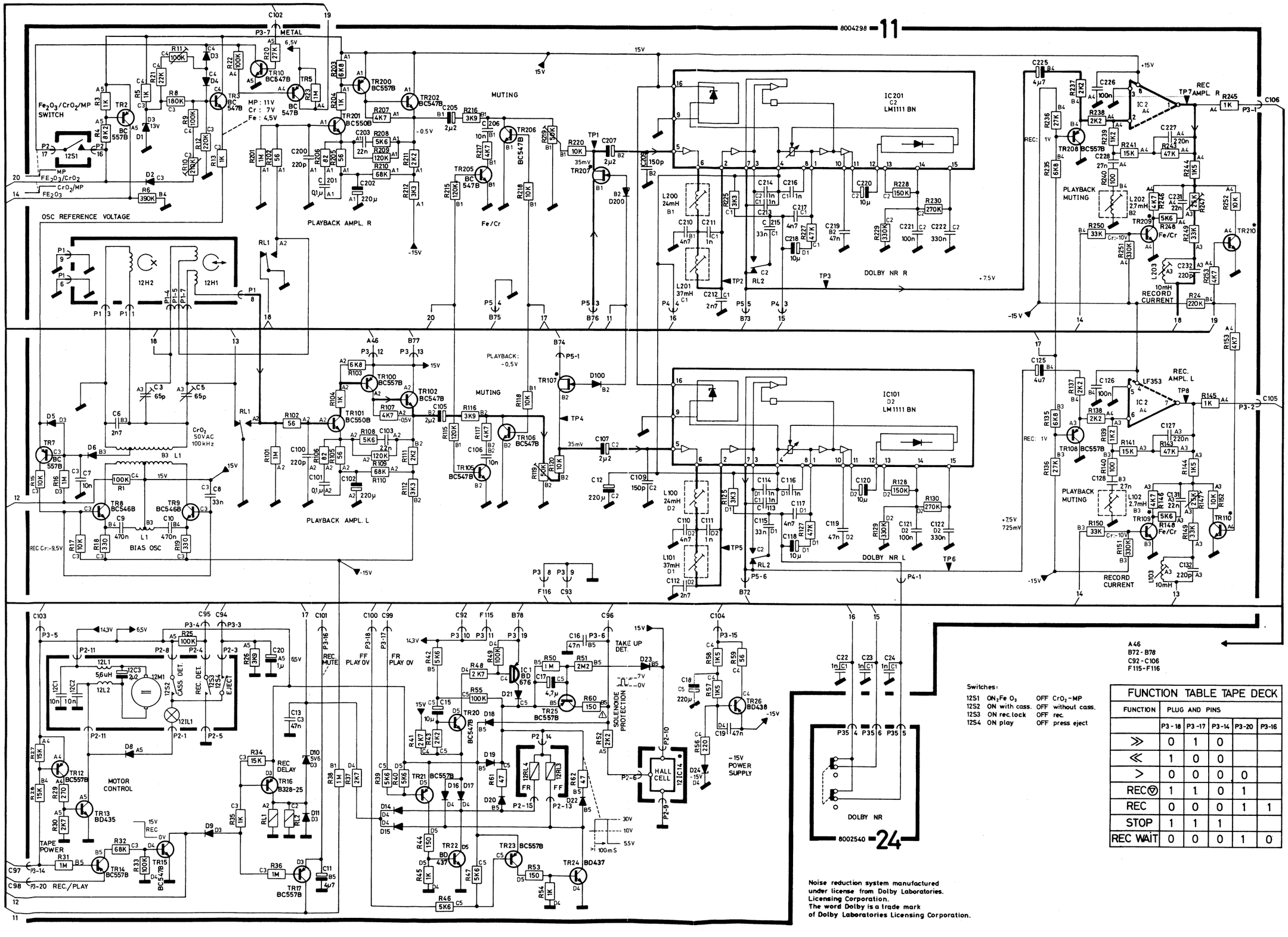


DIAGRAM D


53 8002521
-9Va
TP4
R6 33K
-9V
TP48
C9 47P
R9 2K2
TR1 BC557B
TR2 BC 547B
TR47
TR3 BC337-40
R10 22K
R11 2,2
C4 220µ
R12 220
P5-1
9V
P6-1
P3-8
P4-8
P3-6
P4-6
53D14
53D15
53D16
53D20
TRANSMIT INDI-CATOR
P4-7
P3-7
DP1
DP2
DP3
MUTE
TP8
« RECORD »
NO TRANSMISSION
BPL1
BPL2
BPL3
IC1 4017
÷10
TP49
TP26
TP27
TP28
TP29
TP30
TP31
TP32
TP33
TP34
TP35
TP36
TP37
TP38
TP39
TP40
TP42
TP43
TP44
TP45
TP46
TP50
TP51
TP52
TP53
TP54
TP55
TP56
IC2 MM5452
OUTPUT BUFFERS
LATCHES
LOAD
SHIFT REGISTER
SERIAL DATA
DATA ENABLE
DATA IN
RESET
OSC
÷16
BACKPLANE
TR24 BC547B
TR25 BC557B
TR26 BC547B
TR4 BC557B
TR5 BC337-40
D1 6,8V
R13 1K5
R71 33K
R72 33K
R73 330K
R15 12K
R17 22K
R14 2K7
C5 100n
C6 100n
R22 1 M
C7 680p
R18 10K
R19 10K
R69 390K
R70 390K
R80 100K
C25 100n
R16 5K6
R1 100
X1 400KHz
C1 330p
C2 100p
OSC
TRANSMIT
DISPLAY DATA
DISPLAY Cp
-6V ON/OFF
RESET
POWER HOLD
LAMP DRIVER ON
KEYBOARD DATA IN
REMOTE IN
RECEIVER ON
IC3 µC TMS 1000
RAM 64 NIBBLE
ROM 1024 BYTE
8340375
KEYBOARD OUT (STROBE)
KEYBOARD DATA IN
STATUS
RESET
MUTE
TP 2
RETURN
STOP
P6
ST BY
P3
REC.
P5
TP1
P2
P4
PH
P1
R32 22K
R33 22K
R34 22K
R35 22K
R36 22K
R37 22K
R38 22K
R39 22K
R40 22K
R41 22K
D3
D4
D5
D7
IC4 4066
R44 1M
R45 22K
R46 47K
R48 100K
R75 560K
R49 560K
TR27 BC557B
TR14 BC557B
R47 33K
D10
R78 680
C18 10µ
R76 47K
R77 680
C16 1µ
C10 220n
C13 680n
D8
D11
D12
D13
TR15 BC557B
TR16 BC550C
TR17 BC550C
TR18 BC558C
TR19 BC550C
R50 1M
C11 220p
C12 220p
C14 2n2
C15 2n2
R52 10K
R53 470K
R54 470K
C19 470p
R55 3K9
R56 10K
R57 47K
R58 47K
R59 220K
R61 220K
R60 1M
R63 4K7
R79 4K7
R64 470K
C20 47n
C22 4µ7
C23 220p
L1 55mH
D21
R23 47K
R24 1 M
R26 12K
TR6 BC547B
TR7 BC557B
R74 100K
R27 22K
R28 22K
R29 22K
TR8 BC 557B
TR9 BC 557B
TR10 BC557B
P3 5 4 3 2 1
P4 5 4 3 2 1
53 R20
53 IL3
53 IL2
53 IL1
N.B. Module 53 has a negative supply voltage.
52 8002520
45 8002514
IC2 TDA 4050
A.G.C.
COMPA RATOR
IC1 MPSA 65
D17
L1
C2 220p
R1 470K
C1 22µ
C3 22n
R37 3K3
1K
HK8
10K
3,3
C10 22n
R15 10K
R14 390
C16 0,1µ
D4 5,6V
D18
D19
C5 100µ
R13 10
13,6V
C4 2µ2
R5 680
C6 2µ2
C7 1n5
C8 3n3
R8 2K7
R9 2K7
C9 1n5
R11 1K5
R17 100K
TR1 BC547B
R10 47K
TR8 BC557B
TR6 BC338-25
TR7 BC547B
R7 1K5
R6 22K
R4 3,3
C11 47p
R12 22K
TP 39
TP40
IC4 4017
÷10
R28 1M
R27 1M
C23 1n
R29 10K
400KHz
C24 330p
C25 82p
X1
R36 1K2
R31 180K
R32 10K
R30 330K
TR9 BC547B
TR10 BC547B
R33 100K
TR3 BC338-25
D3 11V
R22 1K
C17 330p
C18 10µ
P70 1
INT. REMOTE OFF
ON
P72 5
P72 1
C86
13,6V
R20 100
C14 4n7
C15 10µ
D2
TR2 BC557B
R16 10K
D1
TP34
C12 22n
R21 47K
R25 100K
IC3 LM555
R-C
C21 1n
TRIG
ONE SHOOT 1mS
OUT
C20 22n
REMOTE IN
TP35
R24 39K
R35 100K
TR4 BC 547B
C19 22n
R23 100K
R18 47K
R19 100K
TR5 BC547B
P70-3
C87
P72 3
ON
OFF
P72 4
R26 150K
D5
EXT. REMOTE CODE
P70-4
B70
C88
P70 5
P70 2
C85
TP37
C90
C89
P70-7
P70-8
P71-4
P71 3
P71 5
P71 1
01L1
+15V
P70 6
B69
44 8002513
MIC. AMPL.
F113
P26-7
P26 9
P26 8
A44
B68
R6 33K
C8 2µ2
R7 33K
TR3 BC 547B
TR2 BC547B
6,7V
16V
0,6V
0,05V
C6 2µ2
C7 2µ2
R5 220K
R8 220
R9 8K2
R4 220K
R3 470
390 R10
P26-1
P26-4
P26-3
P26-5
P26-6
P26-2
B67
B66
A42
A43
B65
A41
MIC.
A41 - A44
B65 - B70
C85 - C90
F113

Bang&Olufsen

DIAGRAM E



Switches:

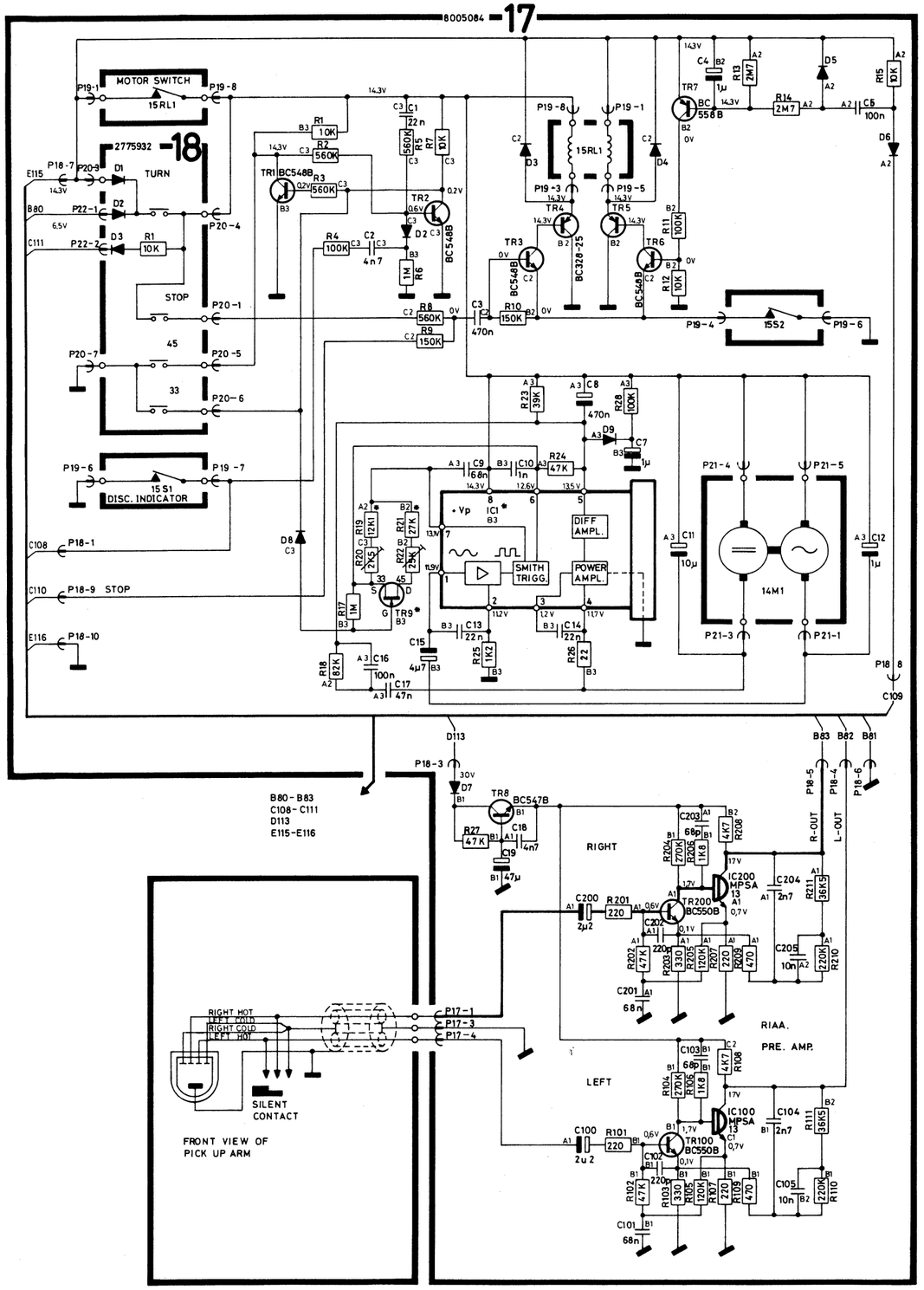
12S1	$ON_2Fe\ O_3$	OFF	CrO_2-MP
12S2	ON with cass.	OFF	without cass.
12S3	ON rec.lock	OFF	rec.
12S4	ON play	OFF	press eject

FUNCTION TABLE TAPE DECK

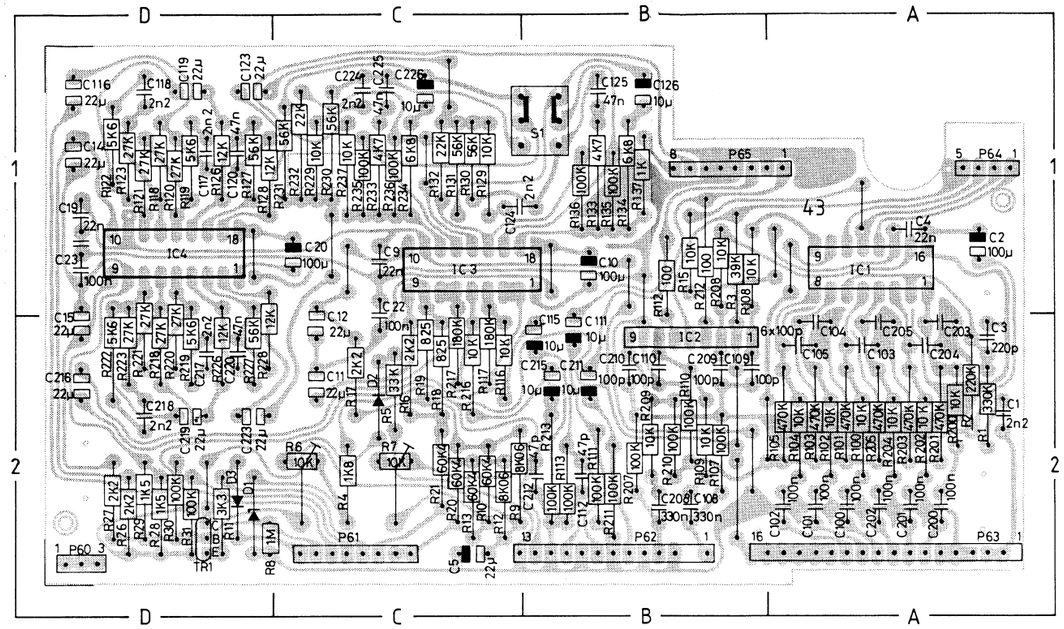
FUNCTION	PLUG AND PINS				
	P3 - 18	P3 - 17	P3 - 14	P3 - 20	P3 - 16
≫	0	1	0		
≪	1	0	0		
>	0	0	0	0	
REC▽	1	1	0	1	
REC	0	0	0	1	1
STOP	1	1	1		
REC WAIT	0	0	0	1	0

Noise reduction system manufactured under license from Dolby Laboratories. Licensing Corporation. The word Dolby is a trade mark of Dolby Laboratories Licensing Corporation.

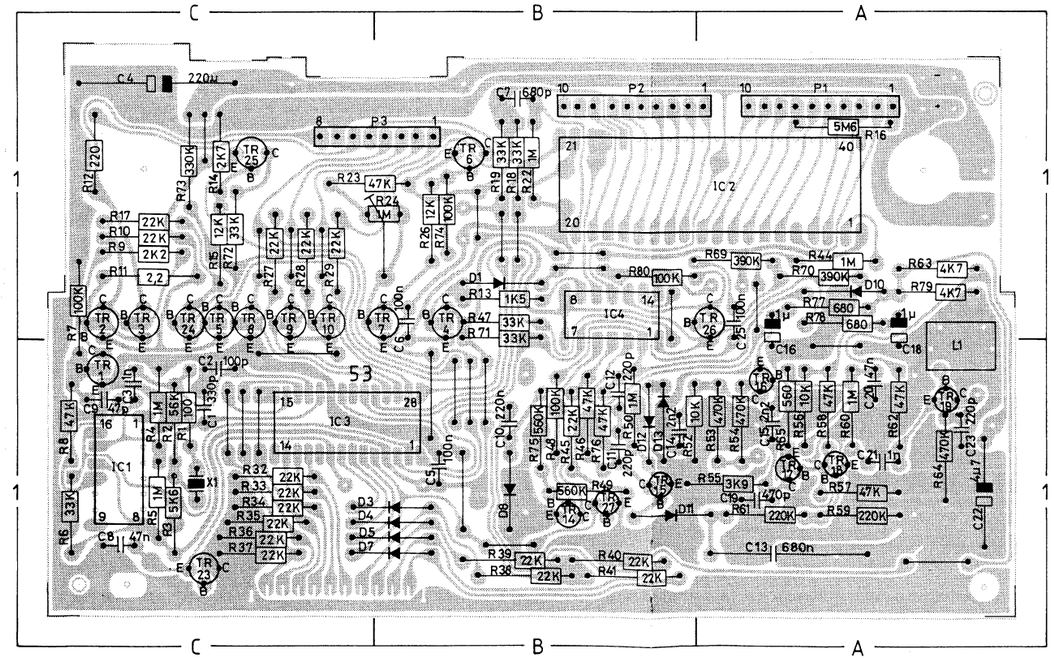
DIAGRAM F



PC drawings are seen from copperfoil side
Volume and Tone Control, 8002512, PC43



Master Control Panel, 8002521, PC53



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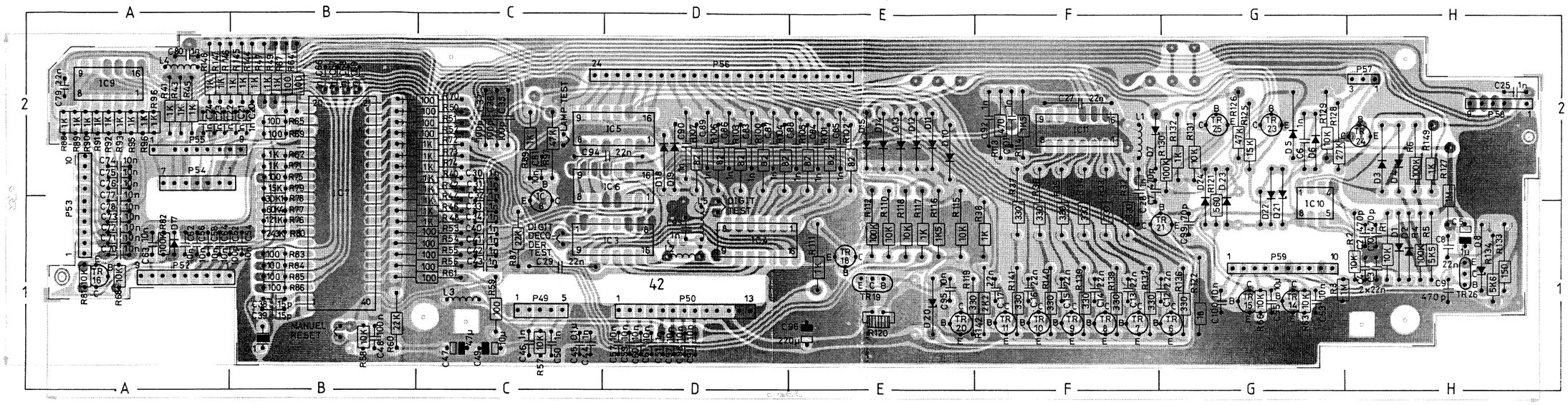
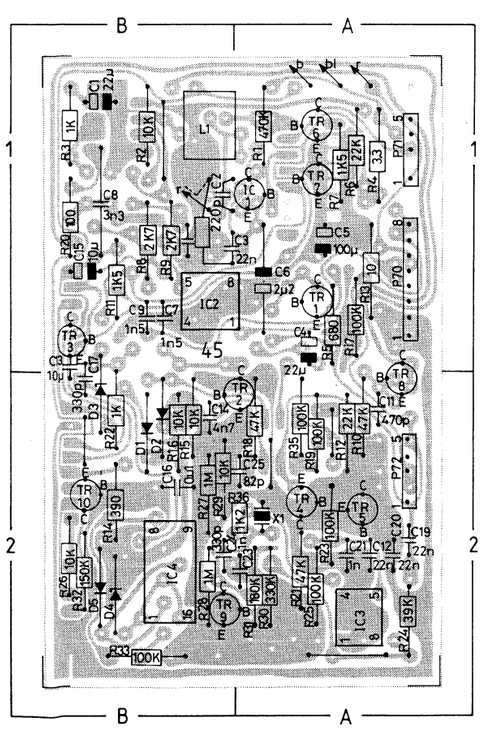
Microcomputer, 8002588, PC42

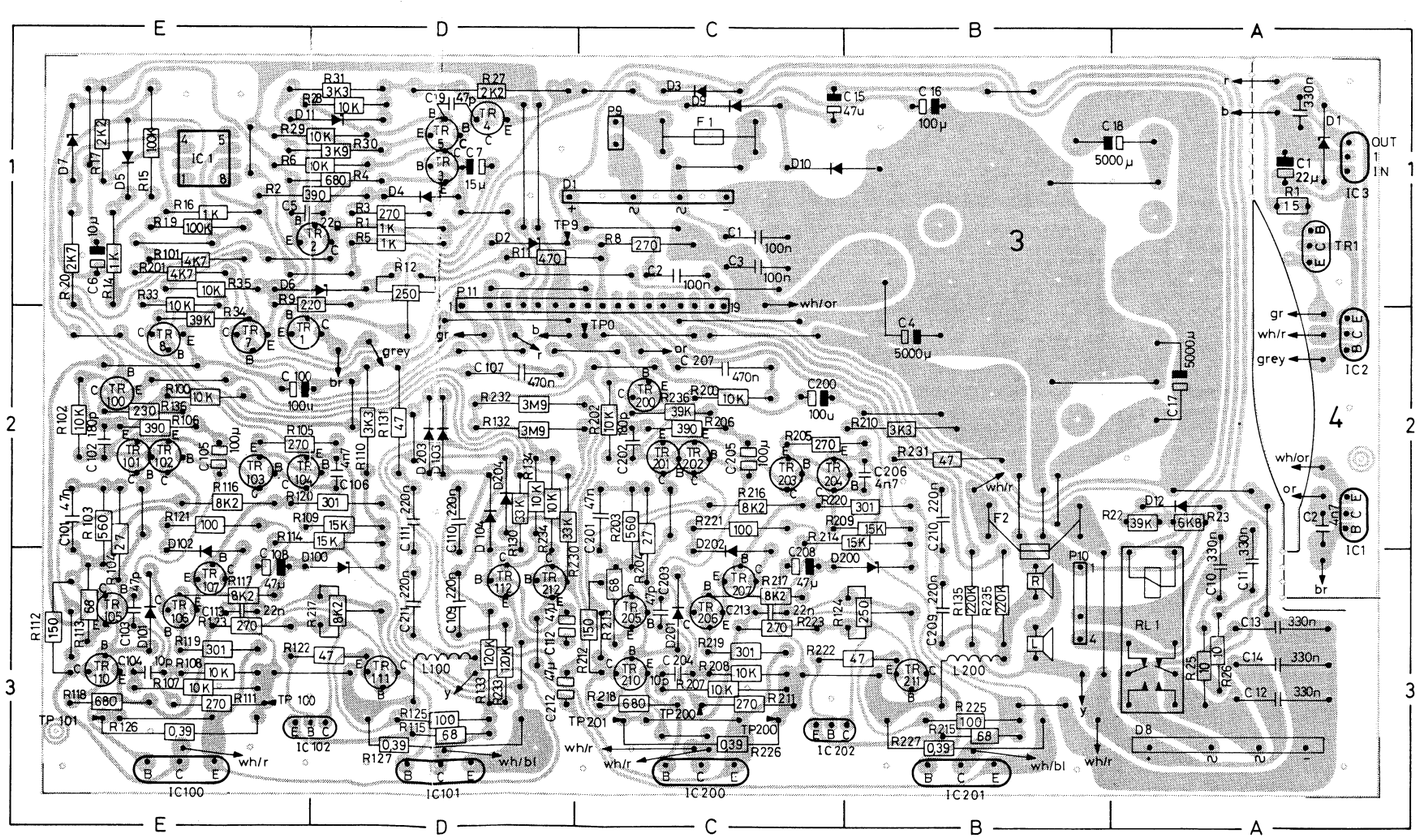
PC drawings are seen from copperfoil side



Remote, 8002514, PC45



Power Supply and Output Amplifier, 8002532, PC3



MEASURING CONDITIONS

All DC voltages are measured relative to ground with voltmeter (inner resistance 10 Mohms).
DC voltages are stated in volts (V), ex.: 0.7 V.
Oscillograms and AC voltages are measured relative to signal ground with oscilloscope or voltmeter with an input resistance of 1 Mohm.
AC voltages are stated in millivolt (mV), ex.: 725 mV.
Voltages on the FM, AM and remote section are measured without signal in position P6 – FM.
Voltages on the turntable section are measured in position PH (33 r.p.m.).
Voltages on the tape recorder section are measured in position TP, play back, (333 Hz, 250 pWb mm).
Signal paths are shown for AM (position MW), FM, remote control, and for AF right channel.
The tape recorder signal path in recording position is shown in right channel, and replay position is shown in left channel.
Mechanical switches are shown in neutral position.

ADJUSTMENT OF NO-SIGNAL-CURRENT

Adjust no-signal-current with receiver cold and volume control turned down.
SPEAKERS MUST NOT BE CONNECTED.
With 3R224 (3R124) adjust to 10 mV DC measured across emitter resistor 3R226 (3R126) TP200/201 (TP100/TP101), or adjust to 25 mA in collector of 3IC200 (3IC100).

SYMBOL FOR SAFETY RESISTORS

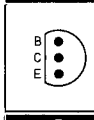
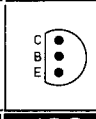
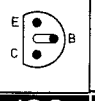
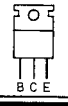
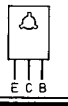
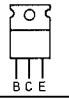
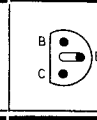
When replacing components with this symbol the same type with the same values of ohm and watt must be used. The new component must be fitted in the same way as the replaced one.

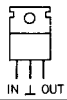
Explanation of the Pin Designation on the Microcomputer 42IC7

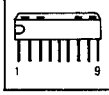
Pin

3-6 PROGRAM SELECT	Selection of program.
8-12 VOLUME OUT	Digital counter sequence for volume matrix.
13 $\overline{\text{MUTE/ST.BY}}$	LOW at MUTE and ST./BY.
14 $\overline{\text{TAPE POWER}}$	LOW when the tape recorder is ON.
15 REMOTE OUT	Feedback signals to Master Control Panel and Master Control Link.
16 TAPE COUNTER	Counter pulses from the Hall element of the collector coil.
17 50/60 Hz	Reference to the TIME functions.
18 $\overline{\text{RECORD LOCK}}$	LOW if REC OPEN cannot be activated.
19 $\overline{\text{TAPE INDICATOR}}$	LOW with a cassette in the cassette tray.
22 $\overline{\text{DISC INDICATOR}}$	Low with a record on the turntable.
23-25 CIFRE SELECT	Binary changing code for multiplexing of the display polling and latch enable.
26 REC./PLAY	Switching between Record and Playback functions.
27 $\overline{\text{FAST REWIND}}$	LOW at fast rewinding and normal forward.
28 $\overline{\text{FAST FORWARD}}$	LOW at fast forward and normal forward.
29-33 KEY IN	Reading-in of data from keyboards.
34-37 BCD OUT	Control of 7-segment decoder and latch.
38 $\overline{\text{REMOTE IN}}$	Input from Master Control Panel and Master Control Link.
39 $\overline{\text{RESET}}$	Goes LOW if mains voltage fails.

LIST OF TRANSISTORS AND IC's

17	19	20	24	31	32	33	42
							

101	102	103	105	109	111	124	125
							

131


3TR1	8320097	**20**	BC 547B
3TR2	8320295	**20**	BC 337-25/18
3TR3	8320152	**20**	BC 557B
3TR4	8320241	**32**	BD 138/W
3TR5	8320237	**20**	BC 546B
3TR7	8320097	**20**	BC 547B
3TR8	8320152	**20**	BC 557B
3TR100/200	8320366	**19**	MPS A16
3TR101/201	8320377	**20**	BC 547C
3TR102/202			
3TR103/203	8320097	**20**	BC 547B
3TR104/204			
3TR105/205	8320365	**19**	MPS H54
3TR106/206	8320097	**20**	BC 547B
3TR107/207	8320152	**20**	BC 557B
3TR110/210	8320321	**19**	MPS A06
3TR111/211			
3TR112/212	8320237	**20**	BC 546B
3IC1	8340141	**103**	LM 741CN
3IC100/200	8340132	**31**	BDV 65A
3IC101/201	8340133	**31**	BDV 64A
3IC102/201	8340054	**19**	MPS A13
4TR1	8320429	**32**	BD 435

4IC1	8340118	**31**	17425
		31	TE 1089
		31	BDX 34A
4IC2	8340117	**31**	17424
		31	TE 1088
		31	BDX 33A
4IC3	8340064	**105**	LM 340T-15
		105	µA 7815
		105	µA 7815UC
11TR2	8320152	**20**	BC 557B
11TR3	8320097	**20**	BC 547B
11TR5	8320152	**20**	BC 557B
11TR7			
11TR8	8320237	**20**	BC 546B
11TR9			
11TR10	8320097	**20**	BC 547B
11TR12	8320152	**20**	BC 557B
11TR13	8320429	**32**	BD 435
11TR14	8320152	**20**	BC 557B
11TR15	8320097	**20**	BC 547B
11TR16	8320331	**20**	BC 328-25/18
11TR17	8320152	**20**	BC 557B
11TR20	8320097	**20**	BC 547B
11TR21	8320152	**20**	BC 557B
11TR22	8320427	**32**	BD 437
11TR23	8320152	**20**	BC 557B

11TR24	8320427	**32**	BD 437
11TR25	8320152	**20**	BC 557B
11TR26	8320428	**32**	BD 438
11TR100/200	8320152	**20**	BC 557B
11TR101/201	8320344	**20**	BC 550B
		20	BC 384 B-N
11TR102/202	8320097	**20**	BC 547B
11TR105/205			
11TR106/206			
11TR107/207	8320396	**24**	MPF 4392
		24	2N 5630
		24	2N 4392
11TR108/208	8320152	**20**	BC 557B
11TR109/209	8320366	**19**	MPS A16
11TR110/210			
11IC1	8340184	**32**	BD 676
11IC2Δ	8340195	**103**	LF 353N
11IC101/201	8340183	**101**	LM 1011AN
12IC14	8004216		Hall-element
17TR1	8320108	**20**	BC 548B
17TR2			
17TR3			
17TR4	8320331	**20**	BC 328-25/18
17TR5			
17TR6	8320108	**20**	BC 548B
17TR7	8320104	**20**	BC 558B
17TR8	8320097	**20**	BC 547B
17TR9	8320396	**24**	MPF 4392
		24	2N 5630
		24	2N 4392
17TR100/200	8320344	**20**	BC 550B
17IC1	8340108	**109**	1003C2
		109	MHN-3P2
			RDS
17IC100/200	8340054	**19**	MPS A13

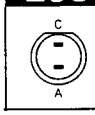
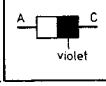
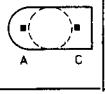
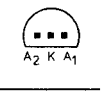
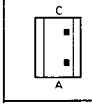
22TR1	8320152	**20**	BC 557B
22TR2			
22TR3			
22TR4			
22TR5			
22TR6			
23TR1	8320329	**20**	BC 338-25/18
23TR2	8320237	**20**	BC 546B
23IC1	8340196	**101**	TDA 1046
41TR1	8320152	**20**	BC 557B
41TR2			
41TR3	8320097	**20**	BC 547B
41TR4			
41IC1	8340382	**103**	U267B
41IC2	8340380	**103**	U257B
42TR6	8320331	**20**	BC 428-25/18
42TR7			
42TR8			
42TR9			
42TR10			
42TR11			
42TR14	8320097	**20**	BC 547B
42TR15			
42TR16			
42TR18			
42TR19	8320368	**31**	BP 533
		33	BP 439
42TR20	8320097	**20**	BC 547B
42TR21	8320152	**20**	BC 557B
42TR23	8320097	**20**	BC 547B
42TR24			
42TR25	8320331	**20**	BC 547B
42TR26	8320240	**32**	BD 136/W
42IC3	8340290	**101**	SN74LS248N
42IC4	8340291	**101**	ULN 2003A
42IC5			
42IC6	8340379	**101**	SN74LS259
42IC7Δ	8340458	**124**	HK 3870/40

42IC8	8340054	**19**	MPS A13
42IC9	8340192	**101**	DM 7445N
		101	SN 7445N
42IC10Δ	8340195	**103**	LF 353N
		103	TL 072CP
		103	UAF 772TC
42IC11	8340192	**101**	DM 7445N
		101	SN 7445N
43TR1	8320097	**20**	BC 547B
43IC1	8340188	**101**	TDA 1029
43IC2	8340381	**131**	TDA 152
43IC3	8340187	**111**	TDA 1074
43IC4			
44TR1	8320097	**20**	BC 547B
44TR2			
44TR3			
44IC1	8340212	**105**	MC 78M05
		105	UA 78M05UC
		105	UA 78M05 CKC
45TR1	8320097	**20**	BC 547B
45TR2	8320152	**20**	BC 557B
45TR3	8320329	**20**	BC 338-25/18
45TR4	8320097	**20**	BC 547B
45TR5			
45TR6	8320329	**20**	BC 338-25/18
45TR7	8320097	**20**	BC 547B
45TR8	8320152	**20**	BC 338-25/18
45TR9	8320097	**20**	BC 547B
45TR10			
45IC1	8340025	**19**	SPS 5431
		19	MS A65
		19	BC 516
45IC2	8340193	**103**	TDA 4050
45IC3	8340144	**103**	555 time

45IC4Δ	8340378	**101**	CP 4017 BCN
		101	MC 14017 BCP
			HEF 4017 BP
47TR1	8320285	**20**	BC 548C
		20	BC 183C/CK
		17	BC 183 CC
47TR2	8320152	**20**	BC 557B
47TR3	8320281	**42**	BF 199
47TR4	8320396	**24**	MPF 4392
		24	2N 5630
		24	2N 4392
47TR5	8320104	**20**	BC 558B
47TR6	8320377	**20**	BC 547C
47TR7		**20**	BC 182 C/CK
		17	BC 182 CC
47TR8	8320104	**20**	BC 558B
47TR9	8320377	**20**	BC 547C
47TR10		**20**	BC 182 C/CK
47TR11		**17**	BC 182 CC
47IC1	8340198	**101**	TDA 1062
47IC2Δ	8340168	**103**	LF 351N
		103	TL 071CP
47IC3	8340233	**101**	CA 3189E
47IC4	8340054	**19**	MPS A13
47IC5			
47IC6	8340284	**101**	TCA 4500A
47IC7Δ	8340195	**103**	LF 353N
		103	TL 072CP
		103	UAF 772TC
53TR1	8320152	**20**	BC 557B
53TR2	8320097	**20**	BC 547B
53TR3	8320487	**20**	BC 337B
53TR4	8320152	**20**	BC 557B
53TR5	8320487	**20**	BC 337B
53TR6	8320097	**20**	BC 547B

53TR7	8320152	**20**	BC 557B
53TR8			
53TR9			
53TR10			
53TR14			
53TR15			
53TR16	8320458	**20**	BC 550C
53TR17			
53TR18	8320398	**20**	BC 558
53TR19	8320458	**20**	BC 550C
53TR23	8320097	**20**	BC 547B
53TR24			
53TR25	8320152	**20**	BC 557B
53TR26	8320097	**20**	BC 547B
53TR27	8320152	**20**	BC 557B
53IC1Δ	8340378	**101**	CD 4017 BCN
			MC 14017 BCP
			HEF 4017 BP
53IC2Δ	8340377	**124**	MM 5452
53IC3Δ	8340375	**125**	TMS 1000-1810
53IC4Δ	8340202	**102**	HEF 4066BP
		102	CD 4066 BCN

LIST OF DIODES ETC.

203	209	215	217	220	222	225	229
							

0D1	8330000	**203**	CQV 15-3
3D1	8300297		B80C3700/2200
3D2	8300135	**209**	ZPD 3.3V 5%
		209	BZX 79 3.3V
		209	BZX 83 3.3V
3D3	8300058	**209**	1N 4148
3D4		**217**	SFD 184
3D5		**215**	1N 4148
3D6	8300222	**209**	ZPD 2.7V 5%
		209	BZX 83 2.7V
		209	BZX 79 2.7V
3D7	8300028	**209**	ZPD 9.1V 5%
		209	BZX 79 9.1V
		209	BZX 83 9.1V
3D8	8300275		B80 C5000/3000
3D9	8300023	**209**	1N 4002
3D10		**209**	1N 4003
3D11	8300313	**209**	ZPD 15V 2%
		209	BZX 79 15V
		209	BZX 83 15V
3D12	8300058	**209**	1N 4148
		217	SFD 184
		215	1N 4148
3D100/200	8300029	**209**	ZPD 12V 5%
		209	BZX 79 12V
		209	BZX 83 12V
3D101/201	8300058	**209**	1N 4148
3D102/202		**217**	SFD 184
3D103/203		**215**	1N 4148
3D104/204			
4D1	8300033	**209**	ZPD 22V 5%
		209	BZX 79 22V
		209	BZX 83 22V
11D1	8300218	**209**	ZPD 13V
		209	BZX 79 13V
		209	BZX 83 13V
11D2	8300058	**209**	1N 4148
11D3		**217**	SFD 184
11D4		**215**	1N 4148
11D5			
11D6			
11D8	8300023	**209**	1N 4002
11D9	8300058	**209**	1N 4148
		217	SFD 184
		215	1N 4148
11D10	8300128	**209**	ZPD 5.6V 5%
		209	BZX 79 5.6V
		209	BZX 83 5.6V
11D11	8300023	**209**	1N 4002

11D14	8300058	**209**	1N 4148
11D15		**217**	SFD 184
11D16		**215**	1N 4148
11D17			
11D18			
11D19	8300023	**209**	1N 4002
11D20			
11D21			
11D22			
11D23	8300058	**209**	1N 4148
		217	SFD 184
		215	1N 4148
11D24	8300053	**209**	ZPD 15V
		209	BZX 79 15V
		209	BZX 83 15V
11D100/200	8300058	**209**	1N 4148
		217	SFD 184
		215	1N 4148
13D1	8300023	**209**	1N 4002
13D2			
17D2	8300058	**209**	1N 4148
17D3		**217**	SFD 184
17D4		**215**	1N 4148
17D5			
17D6			
17D7			
17D8			
18D1	8300023	**209**	1N 4002
18D2			
18D3	8300058	**209**	1N 4148
		217	SFD 184
		215	1N 4148
22D2	8300058	**209**	1N 4148
22D3		**217**	SFD 184
22D4		**215**	1N 4148
22D5			
22D6			
22D7			
22D8			
23D1	8330009	**220**	CQY 41 N/N
23D2			
23D4	8300058	**209**	1N 4148
		217	SFD 184
		215	1N 4148
41DP1	8330011		FCS 8499

41DP2	8330013		FNA 8399
41DP3	8330067		FNA 0097
42D1	8300058	**209**	1N 4148
42D2		**217**	SFD 184
42D3		**215**	1N 4148
42D4			
42D5			
42D6			
42D7	8300326	**209**	ZPD 11V
		209	BZX 83 11V
		209	BZX 79 11V
42D8	8300053	**209**	ZPD 15V
		209	BZX 79 15V
		209	BZX 83 15V
42D10	8300058	**209**	1N 4148
42D11		**217**	SFD 184
42D12		**215**	1N 4148
42D13			
42D14			
42D15			
42D17			
42D18			
42D19			
42D20	8300309	**209**	ZPD 4.7V 2%
		209	BZX 83 4.7V
		209	BZX 79 4.7V
42D21	8300029	**209**	ZPD 12V 5%
		209	BZX 79 12V
		209	BZX 83 12V
42D22	8300058	**209**	1N 4148
42D23		**217**	SFD 184
42D24		**215**	1N 4148
43D1	8300169	**209**	ZPD 5.1V
		209	BZX 79 5.1V
		209	BZX 83 5.1V
43D2	8300058	**209**	1N 4148
43D3		**217**	SFD 184
		215	1N 4148
44D1	8300201	**209**	ZPD 6.2V 5%
		209	BZX 79 6.2V
		209	BZX 83 6.2V
44D2	8300154	**209**	ZPD 6.8V 5%
		209	BZX 79 6.8V
		209	BZX 83 6.8V

44D3	8300058	**209**	1N 4148
44D4		**217**	1SFD 184
		215	1N 4148
44D5	8300023	**209**	1N 4002
44D6		**209**	1N 4003
44D7			
44D8			
45D1	8300058	**209**	1N 4148
45D2		**217**	SFD 184
		215	1N 4148
45D3	8300326	**209**	ZPD 11V 5%
		209	BZX 83 11V
		209	BZX 79 11V
45D4	8300128	**209**	ZPD 5.6V 5%
		209	BZX 79 5.6V
		209	BZX 83 5.6V
45D5	8300058	**209**	1N 4148
		217	SFD 184
		215	1N 4148
45D17	8330004	**219**	SFH 205
45D18	8330073	**229**	V 550
45D19			
47D1	8300308	**222**	BB 204 blue
47D2			
47D3			
47D4			
47D5	8300056	**209**	ZTE 1.5 10%
47D7			
47D8	8300189	**218**	BA 219
47D9			
47D10	8300058	**209**	1N 4148
47D11		**217**	SFD 184
47D12		**215**	1N 4148
53D1	8300154	**209**	ZPD 6.8V 5%
		209	BZX 79 6.8V
		209	BZX 83 6.8V
53D3	8300058	**209**	1N 4148
53D4		**217**	SFD 184
53D5		**215**	1N 4148
53D6			
53D8			
53D10			
53D11			
53D12			
53D13			
53D14	8330022	**203**	LD 271
53D15		**203**	V-290-P
53D16			
53D20	8330000	**203**	CQV 15-3
53D21	8330088	**225**	
53DP1*	8330061		LCD
53DP2*	8330062		LCD
53DP3*	8330060		LCD

Δ betyder at statisk elektricitet kan ødelægge komponenten.
Δ indicates that static electricity may destroy the component.
Δ bedeutet, daß statische Elektrizität die Komponente zerstören kann.

LIST OF ELECTRICAL PARTS

Power Supply and Output Ampl. 8002532, PC3

R1	5010040	1 kohms 5% 1/4W	R203	5010067	560 ohms 5% 1/4W
R2	5010070	390 ohms 5% 1/4W	R204	5010403	27 ohms 5% 1/4W
R3	5010000	270 ohms 5% 1/4W	R205	5010000	270 ohms 5% 1/4W
R4	5010144	680 ohms 5% 1/4W	R206	5010797	390 ohms 2% 1/4W
R5	5010040	1 kohms 5% 1/4W	R207	5010059	10 kohms 5% 1/4W
R6	5010059	10 kohms 5% 1/4W	R208	5010776	10 kohms 2% 1/4W
R8	5001020	270 kohms 10% 1/2W	R209	5010053	15 kohms 5% 1/4W
R9	5010092	220 ohms 5% 1/4W	R210	5001036	3.3 kohms 10% 1/2W
R11	5010058	470 ohms 5% 1/4W	R211	5010000	270 ohms 5% 1/4W
R12	5370174	250 ohms 20%	R212	5010611	150 ohms 5% 1/4W
R14	5010040	1 kohms 5% 1/4W	R213	5010039	68 ohms 5% 1/4W
R15	5010049	100 kohms 5% 1/4W	R214	5010053	15 kohms 5% 1/4W
R16	5010040	1 kohms 5% 1/4W	R215	5010039	68 ohms 5% 1/4W
R17	5010064	2.2 kohms 5% 1/4W	R216	5001041	8.2 kohms 10% 1/2W
R19	5010049	100 kohms 5% 1/4W	R217	5001041	8.2 kohms 10% 1/2W
R20	5001035	2.7 kohms 10% 1/2W	R218	5010144	680 ohms 5% 1/4W
R22	5010060	39 kohms 5% 1/4W	R219	5020514	301 ohms 1% 1/4W
R23	5010052	6.8 kohms 5% 1/4W	R220	5020514	301 ohms 1% 1/4W
R25	5010506	10 ohms 5% 1/4W	R221	5010065	100 ohms 5% 1/4W
R26	5010506	10 ohms 5% 1/4W	R222	5010411	47 ohms 5% 1/4W
R27	5002028	2.2 kohms 10% 1W	R223	5010000	270 ohms 5% 1/4W
R28	5010059	10 kohms 5% 1/4W	R224	5370174	250 ohms 20%
R29	5010059	10 kohms 5% 1/4W	R225	5010362	180 ohms 5% 1/4W
R30	5010069	3.9 kohms 5% 1/4W	R226	5100166	0.39 ohms 10% 2W
R31	5010076	3.3 kohms 5% 1/4W	R227	5100166	0.39 ohms 10% 2W
R32	5010047	120 kohms 5% 1/4W	R230	5010075	33 kohms 5% 1/4W
R33	5010059	10 kohms 5% 1/4W	R231	5000085	4.7 ohms 10% 1/2W
R34	5010060	39 kohms 5% 1/4W	R232	5001076	3.9 Mohms 10% 1/2W
R35	5010059	10 kohms 5% 1/4W	R233	5010047	120 kohms 5% 1/4W
R200	5010776	10 kohms 2% 1/4W	R234	5010059	10 kohms 5% 1/4W
R201	5010048	4.7 kohms 5% 1/4W	R235	5001019	220 ohms 10% 1/2W
R202	5010776	10 kohms 2% 1/4W	R236	5010798	39 kohms 2% 1/4W

C1	4130150	100 nF 20% 10V	C19	4000077	47 pF 2% 63V
C2	4130150	100 nF 20% 100V	C20	4010063	4.7 nF 10% 63V
C3	4130150	100 nF 20% 100V	C200	4201060	100 µF 40V
C4	4200401	5000 µF -10+50% 25V	C201	4130087	47 nF 10% 250V
C5	4010060	22 nF -20+80% 40V	C202	4010029	180 pF 10% 100V
C6	4200431	10 µF 20% 16V	C203	4000077	47 pF 2% 63V
C7	4200230	15 µF 20% 16V	C204	4000016	10 pF 2% 63V
C10	4130171	330 nF 20% 63V	C205	4201060	100 µF 40V
C11	4130171	330 nF 20% 63V	C206	4010063	4.7 nF 10% 63V
C12	4130106	330 nF 20% 100V	C207	4130114	470 nF 10% 100V
C13	4130106	330 nF 20% 100V	C208	4200482	47 µF 20% 10V
C14	4130106	330 nF 20% 100V	C209	4130104	220 nF 20% 100V
C15	4200415	47 µF -10+100% 40V	C210	4130104	220 nF 20% 100V
C16	4200368	100 µF -10+100 63V	C211	4130104	220 nF 20% 100V
C17	4200402	5000 µF -10+50% 35V	C212	4200092	47 µF 16V
C18	4200402	5000 µF -10+50% 35V	C213	4010060	22 nF -20+80% 40V

L200	6850114	0.5 µH	RL1	7600046	Relay 6V
	7500013	Contact pin			

P9	7220195	Plug 2/2 pins	F1	6600010	4A-T 250V S IEC 127
P10	7220196	Plug 4/3 pins	F2	6600006	1A-T 250V S IEC 127
P11	7220142	Plug 19/18 pins			

Power Supply, 8002413, PC4

R1	5010468	15 ohms 5% 1/4W

C1	4200100	22 µF 40V
C2	4010063	4.7 nF 10% 63V
C3	4130171	330 nF 20% 63V

Tape, 8004298, PC11

R1	5010049	100 kohms 5% 1/4W
R3	5010040	1 kohms 5% 1/4W
R4	5010154	8.2 kohms 5% 1/4W
R5	5010040	1 kohms 5% 1/4W
R6	5010073	390 kohms 5% 1/4W
R8	5010072	180 kohms 5% 1/4W
R9	5010049	100 kohms 5% 1/4W
R10	5370156	250 kohms 20%
R11	5370128	100 kohms 20%
R12	5010120	220 kohms 5% 1/4W
R13	5010040	1 kohms 5% 1/4W
R15	5010059	10 kohms 5% 1/4W
R16	5010054	1 Mohms 5% 1/4W
R17	5010059	10 kohms 5% 1/4W
R18	5010044	330 ohms 5% 1/4W
R19	5010044	330 ohms 5% 1/4W
R20	5010141	27 kohms 5% 1/4W
R21	5010079	22 kohms 5% 1/4W
R22	5010049	100 kohms 5% 1/4W
R23	5010054	1 Mohms 5% 1/4W
R24	5010049	100 kohms 5% 1/4W
R25	5010049	100 kohms 5% 1/4W
R26	5010069	3.9 kohms 5% 1/4W
R27	5010053	15 kohms 5% 1/4W
R28	5010053	15 kohms 5% 1/4W
R29	5010000	270 ohms 5% 1/4W
R30	5010298	2.7 kohms 5% 1/4W
R31	5010054	1 Mohms 5% 1/4W
R32	5010062	68 kohms 5% 1/4W
R33	5010049	100 kohms 5% 1/4W
R34	5010053	15 kohms 5% 1/4W
R35	5010040	1 kohms 5% 1/4W
R36	5010054	1 Mohms 5% 1/4W
R37	5010298	2.7 kohms 5% 1/4W
R38	5010054	1 Mohms 5% 1/4W
R39	5010041	5.6 kohms 5% 1/4W
R40	5010041	5.6 kohms 5% 1/4W
R41	5010298	2.7 kohms 5% 1/4W
R42	5010041	5.6 kohms 5% 1/4W
R43	5010064	2.2 kohms 5% 1/4W
R44	5010057	150 ohms 5% 1/4W
R45	5010040	1 kohms 5% 1/4W
R46	5010041	5.6 kohms 5% 1/4W
R47	5010041	5.6 kohms 5% 1/4W
R48	5010298	2.7 kohms 5% 1/4W
R49	5010049	100 kohms 5% 1/4W
R50	5010054	1 Mohms 5% 1/4W
R51	5010245	2.2 Mohms 5% 1/4W
R52	5010064	2.2 kohms 5% 1/4W
R53	5010057	150 ohms 5% 1/4W
R54	5010040	1 kohms 5% 1/4W
R55	5010049	100 kohms 5% 1/4W
R56	5010092	220 ohms 5% 1/4W
R57	5001032	1.5 kohms 10% 1/2W
R58	5001032	1.5 kohms 10% 1/2W
R59	5010151	56 ohms 5% 1/8W
R60	5010057	150 ohms 5% 1/4W
R61	5010411	47 ohms 5% 1/4W
R62	5010411	47 ohms 5% 1/4W
R201	5010054	1 Mohms 5% 1/4W
R202	5010151	56 ohms 5% 1/4W
R203	5010052	6.8 kohms 5% 1/4W
R204	5010040	1 kohms 5% 1/4W
R205	5010151	56 ohms 5% 1/4W
R206	5010056	82 ohms 5% 1/4W
R207	5010048	4.7 kohms 5% 1/4W
R208	5010041	5.6 kohms 5% 1/4W
R209	5010047	120 kohms 5% 1/4W
R210	5010062	68 kohms 5% 1/4W
R211	5010064	2.2 kohms 5% 1/4W
R212	5010076	3.3 kohms 5% 1/4W
R215	5010047	120 kohms 5% 1/4W
R216	5010069	3.9 kohms 5% 1/4W
R217	5010048	4.7 kohms 5% 1/4W
R218	5010059	10 kohms 5% 1/4W
R219	5370061	50 ohms 20%
R220	5010059	10 kohms 5% 1/4W
R225	5010265	3.3 kohms 2% 1/4W
R227	5010045	47 kohms 5% 1/4W
R228	5010057	150 ohms 5% 1/4W
R229	5010117	330 kohms 5% 1/4W
R230	5010083	270 kohms 5% 1/4W
R235	5010052	6.8 kohms 5% 1/4W
R236	5010141	27 kohms 5% 1/4W
R237	5010064	2.2 kohms 5% 1/4W
R238	5010064	2.2 kohms 5% 1/4W
R239	5010153	1.2 kohms 5% 1/4W
R240	5010065	100 ohms 5% 1/4W
R241	5010053	15 kohms 5% 1/4W
R243	5010045	47 kohms 5% 1/4W
R244	5010247	1.5 kohms 5% 1/4W
R245	5010040	1 kohms 5% 1/4W
R246	5010048	4.7 kohms 5% 1/4W
R247	5370153	25 kohms 20%
R248	5010041	5.6 kohms 5% 1/4W
R249	5010075	33 kohms 5% 1/4W
R250	5010075	33 kohms 5% 1/4W
R251	5010117	330 kohms 5% 1/4W
R252	5010059	10 kohms 5% 1/4W
R253	5010048	4.7 kohms 5% 1/4W

C3	4340003	65 pF
C5	4340003	65 pF
C6	4010076	2.7 nF 5% 630V
C7	4010041	10 nF -20+80% 40V
C8	4130110	33 nF 20% 250V
C9	4130114	470 nF 10% 100V
C10	4130144	470 nF 10% 100V
C11	4201061	4.7 µF 63V
C12	4200097	220 µF 16V
C13	4030015	47 nF -20+80% 16V
C15	4201065	10 µF 63V
C16	4130087	47 nF 10% 250V
C17	4200477	4.7 µF 20% 25V
C18	4200299	220 µF 40V
C19	4030015	47 nF -20+80% 16V
C20	4200426	1 µF 50V
C22	4010027	1 nF 10% 100V
C23	4010027	1 nF 10% 100V
C24	4010027	1 nF 10% 100V
C200	4010021	200 pF 10% 100V
C201	4130107	100 nF 10% 250V
C202	4200097	220 µF 16V
C203	4130089	22 nF 10% 250V
C205	4201035	2.2 µF -10+50% 63V
C206	4130109	10 nF 10% 250V
C207	4201035	2.2 µF -10+50% 63V
C209	4000023	150 pF 5% 63V
C210	4110059	4.7 nF 2.5% 63V
C211	4101019	1 nF 5% 63V
C212	4100141	2.7 nF 2.5% 630V
C213	4010027	1 nF 10% 100V
C214	4010027	1 nF 10% 100V
C215	4130222	33 nF 2.5% 63V
C216	4010027	1 nF 10% 100V
C217	4100059	4.7 nF 2.5% 63V
C218	4201065	10 µF -10+50% 63V
C219	4130087	47 nF 10% 250V
C220	4201061	10 µF 2.5% 63V
C221	4130107	100 nF 10% 250V
C222	4130106	330 nF 20% 100V
C225	4200322	4.7 µF -10+50% 63V
C226	4130107	100 nF 10% 250V
C227	4130104	220 nF 20% 100V
C228	4130166	27 nF 5% 250V
C231	4130216	22 nF 10% 63V
C232	4010021	220 pF 10% 100V

L1	8020338	Osc.	L202	8022059	2.7 mH
L200	8022102	24 mH	L203	8022111	10 mH
L201	8022103	37 mH			

RL1	7600052	Relay 6V
1RL2	7600052	Relay 6V

P1	7220139	Plug 11/10 pins	7500053	Contact pin
P2	7220183	Plug 17/16 pins	3304050	Screen/housing
P3	7220302	Plug 20/20 pins	3358137	Heat zink
P4	7220314	Plug 4/4 pins	0593070	Solder tag
P5	7220300	Plug 6/6 pins		

Mains Transformer, 8002373, PC13

C1	4200421	1000 µF -10+50% 6.3V

F1	6600022	Fuse 1.6A-S/250
F2	6600022	Fuse 1.6A-S/250

Phono, 8005038, PC17

R1	5010059	10 kohms 5% 1/4W	R21	5010141	27 kohms 5% 1/4W
R2	5010071	560 kohms 5% 1/4W	R22	5370068	25 kohms 20%
R3	5010071	560 kohms 5% 1/4W	R23	5010060	39 kohms 5% 1/4W
R4	5010049	100 kohms 5% 1/4W	R24	5010045	47 kohms 5% 1/4W
R5	5010071	560 kohms 5% 1/4W	R25	5010153	1.2 kohms 5% 1/4W
R6	5010054	1 Mohms 5% 1/4W	R26	5010777	22 ohms 10% 0.7W
R7	5010059	10 kohms 5% 1/4W	R27	5010045	47 kohms 5% 1/4W
R8	5010071	560 kohms 5% 1/4W	R201	5010092	220 ohms 5% 1/4W
R9	5010063	150 kohms 5% 1/4W	R202	5010045	47 kohms 5% 1/4W
R10	5010063	150 kohms 5% 1/4W	R203	5010044	330 ohms 5% 1/4W
R11	5010049	100 kohms 5% 1/4W	R204	5010083	270 kohms 5% 1/4W
R12	5010059	10 kohms 5% 1/4W	R205	5010047	120 kohms 5% 1/4W
R13	5010431	2.7 Mohms 5% 1/4W	R206	5010066	1.8 kohms 5% 1/4W
R14	5010431	2.7 Mohms 5% 1/4W	R207	5010092	220 ohms 5% 1/4W
R15	5010059	10 kohms 5% 1/4W	R208	5010048	4.7 kohms 5% 1/4W
R17	5010054	1 Mohms 5% 1/4W	R209	5010058	470 ohms 5% 1/4W
R18	5010091	82 kohms 5% 1/4W	R210	5010120	220 kohms 5% 1/4W
R19	5020139	12.1 kohms 1% 1/4W	R211	5020019	36.5 kohms 5% 1/4W
R20	5370173	2.5 kohms 20%			

C1	4010060	22 nF -20+80% 40V	C15	4200322	4.7 µF -10+50% 63
C2	4011022	4.7 nF -20+80% 40V	C16	4130103	100 nF 20% 250V
C3	4130114	470 nF 10% 100V	C17	4130078	47 nF 20% 250V
C4	4201057	1 µF 35V	C18	4011022	4.7 nF -20+80% 40V
C5	4130103	100 nF 20% 250V	C19	4201074	47 µF 40V
C8	4200476	0.47 µF 50V	C200	4200423	2.2 µF 50V
C9	4100098	68 nF 2.5% 63V	C201	4130100	68 nF 10% 250V
C10	4110027	1 nF 10% 100V	C202	4000029	220 pF 5% 63V
C11	4200432	10 µF -10+50% 63V	C203	4000019	68 pF 5% 63V
C12	4200426	1 µF 50V	C204	4010065	2.7 nF 10% 63V
C13	4010060	22 nF -20+80% 40V	C205	4130109	10 nF 10% 250V
C14	4010060	22 nF -20+80% 40V			

P17	7220131	Plug 4/3 pins	P20	7220181	Plug 7/6 pins
P18	7220298	Plug 10/10 pins	P21	7220160	Plug 5/4 pins
P19	7220130	Plug 8/7 pins		7500013	Contact pin

Phono Keyboard, 8005047, PC18

R1	5010059	10 kohms 5% 1/4W

P22	7220301	Plug 2/2 pins

Preset, 8002531, PC22

R1	5010040	1 kohms 5% 1/4W	R12	5300092	100 kohms. PRESET
R2	5010053	15 kohms 5% 1/8W	R13	5010040	1 kohms 5% 1/4W
R3	5010062	68 kohms 5% 1/4W	R14	5010053	15 kohms 5% 1/4W
R4	5010040	1 kohms 5% 1/4W	R15	5300092	100 kohms. PRESET
R5	5010053	15 kohms 5% 1/4W	R17	5010053	15 kohms 5% 1/4W
R6	5300092	100 kohms. PRESET	R18	5300090	100 kohms. PRESET
R7	5010040	1 kohms 5% 1/4W	R19	5370058	5 kohms 20%
R8	5010053	15 kohms 5% 1/4W	R21	5310080	470 kohms. BALANCE
R9	5300092	100 kohms. PRESET	R22	5310080	470 kohms. TREBLE
R10	5010040	1 kohms 5% 1/4W	R23	5310080	470 kohms. BASS
R11	5010053	15 kohms 5% 1/4W	R24	5010053	15 kohms 5% 1/4W

P27	7220306	Plug 19/19 pins	7402088	Switch AUTO MONO

AM, 8002534, PC23

R1	5010448	220 ohms 5% 1/4W	R7	5010079	22 kohms 5% 1/4W
R3	5010048	4.7 kohms 5% 1/4W	R8	5370074	10 kohms 20%
R4	5010053	15 kohms 5% 1/4W	R9	5370058	5 kohms 20%
R5	4310013	2 x 335 pF +100 kohms	R10	5010053	15 kohms 5% 1/4W
R6	5010048	4.7 kohms 5% 1/4W	R11	5010073	390 kohms 5% 1/4W

C1	4000016	10 pF 2% 63V	C14	4200423	2.2 µF 20% 50V
C2	4340003	5.5-65 pF foil	C16	4130103	100 nF 20% 250V
C3	4011025	3.3 nF 10% 40V	C17	4000101	120 pF 5% 63V
C4	4340002	2-22 pF foil	C18	4101020	1.5 nF 5% 63V
C5	4130103	100 nF 20% 250V	C19	4101020	1.5 nF 5% 63V
C6	4130150	100 nF 20% 100V	C20	4010060	22 nF -20+80% 40V
C7	4100123	130 pF 2.5% 63V	C21	4100029	2.2 nF 5% 63V
C8	4340003	5.5-65 pF foil	C22	4130103	100 nF 20% 250V
C9	4003130	47 pF 20% 63V	C23	4130103	100 nF 20% 250V
C10	4310013	2 x 335 pF +100 kohms	C24	4200480	22 µF 20% 10V
C11	4310013	2 x 335 pF +100 kohms	C25	4200480	22 µF 20% 10V
C12	4100128	330 pF 2.5% 63V	C26	4010062	330 pF 10% 100V
C13	4340002	2-22 pF foil	C27	4200474	0.1 µF 20% 50V

L1	8020313	Coil LW	L4	8020316	Coil MW osc.
L2	8020331	Coil MW	L6	8020314	469 kHz
L3	8020317	Coil LM osc.	L7	8020315	469 kHz

X1	8030006	468 kHz ±1.5 kHz	FE1	6710001	Ferrit core
X2	8030006	468 kHz ±1.5 kHz			

P6	7220305	Plug 16/16 pins	IL1	8230060	80 mA 6V

	7400250	Switch AM-FM
	7500013	Contact pin
	3304017	Screen/housing

Switch Section, 8002540, PC24

R1	5010046	12 kohms 5% 1/4W	P81	7220279	Plug 2/2 pins
R2	5010046	12 kohms 5% 1/4W	P35	7220308	Plug 6/6 pins

	7400249	Switch

Record Level, 8002565, PC25

R3	5310084	2 x 47 kohms	C1	4200101	10 µF 20% 16V
R4			C2	4200101	10 µF 20% 16V

P23	7220296	Plug 9/9 pins

Display, 8002510, PC41

R10	5010056	82 ohms 5% 1/4W	R19	5010058	470 ohms 5% 1/4W
R11	5010056	82 ohms 5% 1/4W	R20	5010058	470 ohms 5% 1/4W
R14	5010058	470 ohms 5% 1/4W	R22	5010039	68 ohms 5% 1/4W
R15	5010058	470 ohms 5% 1/4W	R23	5010039	68 ohms 5% 1/4W
R16	5010058	470 ohms 5% 1/4W	R24	5010039	68 ohms 5% 1/4W
R17	5010058	470 ohms 5% 1/4W	R25	5010039	68 ohms 5% 1/4W
R18	5010058	470 ohms 5% 1/4W			

C1	4010041	10 nF -20+80% 40V

IL1	8230057	30 mA 6V	IL4	8230057	30 mA 6V
IL2	8230057	30 mA 6V	IL5	8230057	30 mA 6V
IL3	8230057	30 mA 6V	IL6	8230057	30 mA 6V

P56	7210111	Socket 3 x 8/8 pins	P57	7210340	Socket 3/3 pins
P56 Service	7210109	Socket 3 x 8/8 pins	P57 Service	7210108	Socket 3/3 pins

Microcomputer, 8002588, PC42

R1	5010059	10 kohms 5% 1/4W	R84	5010065	100 ohms 5% 1/4W
R2	5010059	10 kohms 5% 1/4W	R85	5010065	100 ohms 5% 1/4W
R3	5010054	1 Mohms 5% 1/4W	R86	5010065	100 ohms 5% 1/4W
R4	5010049	100 kohms 5% 1/4W	R87	5010079	22 kohms 5% 1/4W
R5	5010041	5.6 kohms 5% 1/4W	R88	5010040	1 kohms 5% 1/4W
R6	5010049	100 kohms 5% 1/4W	R89	5010040	1 kohms 5% 1/4W
R32	5010044	330 ohms 5% 1/4W	R90	5010040	1 kohms 5% 1/4W
R33	5010044	330 ohms 5% 1/4W	R91	5010040	1 kohms 5% 1/4W
R34	5010044	330 ohms 5% 1/4W	R92	5010040	1 kohms 5% 1/4W
R35	5010044	330 ohms 5% 1/4W	R93	5010040	1 kohms 5% 1/4W
R36	5010044	330 ohms 5% 1/4W	R94	5010040	1 kohms 5% 1/4W
R37	5010044	330 ohms 5% 1/4W	R95	5010040	1 kohms 5% 1/4W
R38	5010040	1 kohms 5% 1/4W	R96	5010040	1 kohms 5% 1/4W
R40	5010040	1 kohms 5% 1/4W	R97	5010045	47 kohms 5% 1/4W
R41	5010040	1 kohms 5% 1/4W	R98	5010040	1 kohms 5% 1/4W
R42	5010040	1 kohms 5% 1/4W	R100	5010056	82 ohms 5% 1/4W
R43	5010040	1 kohms 5% 1/4W	R101	5010056	82 ohms 5% 1/4W
R44	5010040	1 kohms 5% 1/4W	R102	5010056	82 ohms 5% 1/4W
R45	5010040	1 kohms 5% 1/4W	R103	5010056	82 ohms 5% 1/4W
R46	5010040	1 kohms 5% 1/4W	R104	5010056	82 ohms 5% 1/4W
R47	5010040	1 kohms 5% 1/4W	R105	5010056	82 ohms 5% 1/4W
R48	5010040	1 kohms 5% 1/4W	R106	5010056	82 ohms 5% 1/4W
R50	5010065	100 ohms 5% 1/4W	R107	5010039	68 ohms 5% 1/4W
R51	5010065	100 ohms 5% 1/4W	R110	5010059	10 kohms 5% 1/4W
R52	5010065	100 ohms 5% 1/4W	R111	5010040	1 kohms 5% 1/4W
R53	5010065	100 ohms 5% 1/4W	R112	5010049	100 kohms 5% 1/4W
R55	5010065	100 ohms 5% 1/4W	R113	5010058	470 ohms 5% 1/4W
R56	5010065	100 ohms 5% 1/4W	R114	5010247	1.5 kohms 5% 1/4W
R57	5010059	10 kohms 5% 1/4W	R115	5010059	10 kohms 5% 1/4W
R58	5010059	10 kohms 5% 1/4W	R116	5010247	1.5 kohms 5% 1/4W
R59	5010065	100 ohms 5% 1/4W	R117	5010040	1 kohms 5% 1/4W
R60	5010065	100 ohms 5% 1/4W	R118	5010059	10 kohms 5% 1/4W
R61	5010065	100 ohms 5% 1/4W	R119	5010044	330 ohms
R62	5010040	1 kohms 5% 1/4W	R120	5230008	50 ohms 30% PTC
R63	5010059	10 kohms 5% 1/4W	R121	5010067	560 ohms 5% 1/4W
R64	5010065	100 ohms 5% 1/4W	R122	5010787	18 ohms 5% 1/4W
R65	5010065	100 ohms 5% 1/4W	R125	5010053	15 kohms 5% 1/4W
R66	5010059	10 kohms 5% 1/4W	R126	5010045	47 kohms 5% 1/4W
R67	5010065	100 ohms 5% 1/4W	R127	5010054	1 Mohms 5% 1/4W
R68	5010059	10 kohms 5% 1/4W	R128	5010141	27 kohms 5% 1/4W
R69	5010065	100 ohms 5% 1/4W	R129	5010059	10 kohms 5% 1/4W
R70	5010065	100 ohms 5% 1/4W	R130	5010049	100 kohms 5% 1/4W
R71	5010040	1 kohms 5% 1/4W	R131	5010059	10 kohms 5% 1/4W
R72	5010040	1 kohms 5% 1/4W	R132	5010040	1 kohms 5% 1/4W
R73	5010040	1 kohms 5% 1/4W	R133	5010611	150 ohms 5% 1/4W
R74	5010040	1 kohms 5% 1/4W	R134	5010041	5.6 kohms 5% 1/4W
R75	5010065	100 ohms 5% 1/4W	R136	5010044	330 ohms 5% 1/4W
R76	5020508	121 kohms 1% 1/4W	R137	5010044	330 ohms 5% 1/4W
R77	5020097	60.4 kohms 1% 1/4W	R138	5010044	330 ohms 5% 1/4W
R78	5020511	30.1 kohms 1% 1/4W	R139	5010044	330 ohms 5% 1/4W
R79	5010053	15 kohms 5% 1/4W	R140	5010044	330 ohms 5% 1/4W
R80	5020011	243 kohms 2% 1/4W	R141	5010044	330 ohms 5% 1/4W
R81	5010059	10 kohms 5% 1/4W	R142	5010064	2.2 kohms 5% 1/4W
R82	5010049	100 kohms 5% 1/4W	R144	5010040	1 kohms 5% 1/4W
R83	5010065	100 ohms 5% 1/4W	R145	5010040	1 kohms 5% 1/4W

R146	5010040	1 kohms 5% 1/4W	R148	5010040	1 kohms 5% 1/4W
R147	5010040	1 kohms 5% 1/4W	R149	5010040	1 kohms 5% 1/4W

C2	4010024	470 pF 10% 100V	C53	4010041	10 nF -20+80% 40V
C3	4010060	22 nF -20+80% 40V	C54	4010041	10 nF -20+80% 40V
C4	4010060	22 nF -20+80% 40V	C55	4010041	10 nF -20+80% 40V
C5	4200426	1 µF 20% 50V	C56	4010041	10 nF -20+80% 40V
C6	4010112	1 nF 10% 50V	C57	4010041	10 nF -20+80% 40V
C7	4010024	470 pF 10% 100V	C58	4010041	10 nF -20+80% 40V
C8	4010060	22 nF -20+80% 40V	C59	4010041	10 nF -20+80% 40V
C9	4010024	470 pF 10% 100V	C60	4010041	10 nF -20+80% 40V
C10	4010024	470 pF 10% 100V	C61	4010041	10 nF -20+80% 40V
C12	4010060	22 nF -20+80% 40V	C62	4010041	10 nF -20+80% 40V
C13	4010060	22 nF -20+80% 40V	C63	4010041	10 nF -20+80% 40V
C14	4010060	22 nF -20+80% 40V	C64	4010041	10 nF -20+80% 40V
C15	4010060	22 nF -20+80% 40V	C66	4010027	1 nF 10% 100V
C16	4010060	22 nF -20+80% 40V	C67	4010027	1 nF 10% 100V
C17	4010060	22 nF -20+80% 40V	C68	4010027	1 nF 10% 100V
C20	4010027	1 nF 10% 100V	C69	4010027	1 nF 10% 100V
C21	4010027	1 nF 10% 100V	C70	4010041	10 nF -20+80% 40V
C22	4010027	1 nF 10% 100V	C71	4010041	10 nF -20+80% 40V
C23	4010027	1 nF 10% 100V	C72	4010041	10 nF -20+80% 40V
C24	4010027	1 nF 10% 100V	C73	4010041	10 nF -20+80% 40V
C25	4010027	1 nF 10% 100V	C74	4010041	10 nF -20+80% 40V
C27	4010113	22 nF 30% 25V	C75	4010041	10 nF -20+80% 40V
C28	4010112	1 nF 10% 50V	C76	4010041	10 nF -20+80% 40V
C29	4010113	22 nF 30% 25V	C77	4010041	10 nF -20+80% 40V
C30	4010027	1 nF 10% 100V	C78	4010041	10 nF -20+80% 40V
C31	4010027	1 nF 10% 100V	C79	4010060	22 nF -20+80% 40V
C32	4010027	1 nF 10% 100V	C80	4010027	1 nF 10% 100V
C33	4010027	1 nF 10% 100V	C81	4010041	10 nF -20+80% 40V
C34	4010027	1 nF 10% 100V	C83	4010112	1 nF 10% 50V
C35	4000162	100 pF 5% 50V	C84	4010112	1 nF 10% 50V
C36	4000162	100 pF 5% 50V	C85	4010112	1 nF 10% 50V
C37	4000162	100 pF 5% 50V	C86	4010112	1 nF 10% 50V
C38	4000025	15 pF 5% 63V	C87	4010112	1 nF 10% 50V
C39	4000025	15 pF 5% 63V	C88	4010112	1 nF 10% 50V
C40	4000069	100 pF 5% 63V	C89	4010112	1 nF 10% 50V
C41	4000069	100 pF 5% 63V	C90	4010112	1 nF 10% 50V
C42	4000069	100 pF 5% 63V	C91	4010041	10 nF -20+80%
C43	4000069	100 pF 5% 63V	C92	4010112	1 nF 10% 50%
C44	4010027	1 nF 10% 100V	C93	4010027	1 nF 10% 100V
C45	4130179	100 nF 20% 63V	C94	4010113	22 nF 30% 25V
C46	4010027	1 nF 10% 100V	C95	4010041	10 nF -20+80% 40V
C47	4200482	47 µF 20% 10V	C96	4200097	220 µF -10+100% 10V
C48	4130179	100 nF 20% 63V	C97	4010041	10 nF -20+80% 40V
C49	4200431	10 µF 20% 16V	C98	4010041	10 nF -20+80% 40V
C50	4010027	1 nF 10% 100V	C99	4010024	470 pF 10% 100V
C51	4010027	1 nF 10% 100V	C100	4010041	10 nF -20+80% 40V
C52	4000069	100 pF 5% 63V	C101	4010112	1 nF 10% 50V

L1	8020342	10 mH	L4	8020342	10 mH
L2	8020342	10 mH	L5	8020342	10 mH
L3	8020342	10 mH			

X1	8090010	3.925 MHz

P49	7220246	Plug 5/5 pins	P55	7220124	Plug 9/8 pins
P50	7220309	Plug 13/13 pins	P56	7220290	Plug 2 x 12/12 pins
P52	7220296	Plug 9/9 pins	P57	7220289	Plug 3/3 pins
P53	7220297	Plug 10/10 pins	P58	7220209	Plug 6/5 pins
P54	7220247	Plug 7/7 pins	P59	7220297	Plug 10/10 pins

Vol. and Tone Control, 8002512, PC43

R1	5010117	330 kohms 5% 1/4W	R204	5010059	10 kohms 5% 1/4W
R2	5010120	220 kohms 5% 1/4W	R205	5010077	470 kohms 5% 1/4W
R3	5010060	39 kohms 5% 1/4W	R207	5010049	100 kohms 5% 1/4W
R4	5010066	1.8 kohms 5% 1/4W	R208	5010059	10 kohms 5% 1/4W
R5	5010072	33 kohms 5% 1/4W	R209	5010059	10 kohms 5% 1/4W
R6	5370074	10 kohms 20%	R210	5010049	100 kohms 5% 1/4W
R7	5370074	10 kohms 20%	R211	5010049	100 kohms 5% 1/4W
R8	5010054	1 Mohms 5% 1/4W	R212	5010065	100 ohms 5% 1/4W
R9	5020340	8.06 kohms 1% 1/4W	R213	5010049	100 kohms 5% 1/4W
R10	5020097	60.4 kohms 1% 1/4W	R216	5010059	10 kohms 5% 1/4W
R11	5010076	3.3 kohms 5% 1/4W	R217	5010072	180 kohms 5% 1/4W
R12	5020340	8.06 kohms 1% 1/4W	R218	5010141	27 kohms 5% 1/4W
R13	5020097	60.4 kohms 1% 1/4W	R219	5010041	5.6 kohms 5% 1/4W
R15	5010059	10 kohms 5% 1/4W	R220	5010141	27 kohms 5% 1/4W
R16	5010064	2.2 kohms 5% 1/4W	R221	5010141	27 kohms 5% 1/4W
R17	5010064	2.2 kohms 5% 1/4W	R222	5010041	5.6 kohms 5% 1/4W
R18	5020185	825 ohms 1% 1/4W	R223	5010141	27 kohms 5% 1/4W
R19	5020185	825 ohms 1% 1/4W	R226	5010046	12 kohms 5% 1/4W
R20	5020097	60.4 kohms 1% 1/4W	R227	5010061	56 kohms 5% 1/4W
R21	5020097	60.4 kohms 1% 1/4W	R228	5010046	12 kohms 5% 1/4W
R26	5010064	2.2 kohms 5% 1/4W	R229	5010059	10 kohms 5% 1/4W
R27	5010059	10 kohms 5% 1/4W	R230	5010061	56 kohms 5% 1/4W
R28	5010247	1.5 kohms 5% 1/4W	R231	5010061	56 kohms 5% 1/4W
R29	5010247	1.5 kohms 5% 1/4W	R232	5010079	22 kohms 5% 1/4W
R30	5010049	100 kohms 5% 1/4W	R233	5010048	4.7 kohms 5% 1/4W
R31	5010049	100 kohms 5% 1/4W	R234	5010052	6.8 kohms 5% 1/4W
R200	5010059	10 kohms 5% 1/4W	R235	5010049	100 kohms 5% 1/4W
R201	5010077	470 kohms 5% 1/4W	R236	5010049	100 kohms 5% 1/4W
R202	5010059	10 kohms 5% 1/4W	R237	5010040	1 kohms 5% 1/4W
R203	5010077	470 kohms 5% 1/4W			

C1	4010103	2.2 nF 10% 63V	C203	4000085	100 pF 2% 63V
C2	4200403	100 µF -10+100% 25V	C204	4000085	100 pF 2% 63V
C3	4010104	220 pF 10% 250V	C205	4000085	100 pF 2% 63V
C4	4010107	22 nF -20+100% 40V	C208	4130236	330 nF 20% 63V
C5	4200517	22 µF 20% 50V	C209	4000085	100 pF 2% 63V
C9	4010107	22 nF -20+100% 40V	C210	4000085	100 pF 2% 63V
C10	4200403	100 µF -10+100% 25V	C211	4200524	10 µF 20% 25V
C11	4200518	22 µF -10+100% 16V	C212	4000077	47 pF 2% 63V
C12	4200518	22 µF -10+100% 16V	C215	4200524	10 µF 20% 25V
C14	4200518	22 µF -10+100% 16V	C216	4200518	22 µF -10+100% 16V
C15	4200518	22 µF -10+100% 16V	C217	4010103	2.2 nF 10% 63V
C19	4010107	22 nF -20+100% 40V	C218	4010103	2.2 nF 10% 63V
C20	4200403	100 µF -10+100% 25V	C219	4200518	22 µF -10+100% 16V
C22	4130179	100 nF 20% 63V	C220	4130235	47 nF 20% 63V
C23	4130179	100 nF 20% 63V	C223	4200518	22 µF -10+100% 16V
C200	4130179	100 nF 20% 63V	C224	4010103	2.2 nF 10% 63V
C201	4130179	100 nF 20% 63V	C225	4130235	47 nF 20% 63V
C202	4130179	100 nF 20% 63V	C226	4200510	10 µF 20% 16V

S1	7400195	Switch (Loudn.)

P60	7220295	Plug 3/3 pins	P63	7220292	Plug 16/16 pins
P61	7220293	Plug 8/8 pins	P64	7220314	Plug 4/4 pins
P62	7220173	Plug 13/12 pins	P65	7220293	Plug 8/8 pins

Power Back Up, 8002513, PC44

R1	5010066	1.8 kohms 5% 1/4W	R8	5010092	220 ohms 5% 1/4W
R2	5010059	10 kohms 5% 1/4W	R9	5010154	8.2 kohms 5% 1/4W
R3	5010058	470 ohms 5% 1/4W	R10	5010070	390 ohms 5% 1/4W
R4	5010120	220 kohms 5% 1/4W	R13	5011024	680 ohms 5% 1/4W
R5	5010120	220 kohms 5% 1/4W	R14	5011024	680 ohms 5% 1/4W
R6	5010075	33 kohms 5% 1/4W	R15	5010054	1 Mohms 5% 1/4W
R7	5010075	33 kohms 5% 1/4W			

C1	4200532	10000 µF -20+50% 25V	C5	4010024	470 pF 10% 100V
C2	4130171	3000 nF 20% 63V	C6	4200423	2.2 µF 20% 50V
C3	4200431	10 µF 20% 16V	C7	4200423	2.2 µF 20% 50V
C4	4130171	330 nF 20% 63V	C8	4200423	2.2 µF 20% 50V

F1	6604004	800 mA-250V

P24	7220294	Plug 11/11 pins		7210338	Jack Socket
P26	7220296	Plug 9/9 pins		7210339	Jack Socket
P51	7220246	Plug 5/5 pins			

Remote, 8002514, PC45

R1	5010077	470 kohms 5% 1/4W	R19	5010049	100 kohms 5% 1/4W
R2	5010059	10 kohms 5% 1/4W	R20	5010065	100 ohms 5% 1/4W
R3	5010040	1 kohms 5% 1/4W	R21	5010045	47 kohms 5% 1/4W
R4	5001164	3.3 ohms 10% 1/2W	R22	5010040	1 kohms 5% 1/4W
R5	5010144	680 ohms 5% 1/4W	R23	5010049	100 kohms 5% 1/4W
R6	5010079	22 kohms 5% 1/4W	R24	5010060	39 kohms 5% 1/4W
R7	5010247	1.5 kohms 5% 1/4W	R25	5010049	100 kohms 5% 1/4W
R8	5010298	2.7 kohms 5% 1/4W	R26	5010063	150 kohms 5% 1/4W
R9	5010298	2.7 kohms 5% 1/4W	R27	5010054	1 Mohms 5% 1/4W
R10	5010045	47 kohms 5% 1/4W	R28	5010054	1 Mohms 5% 1/4W
R11	5010247	1.5 kohms 5% 1/4W	R29	5010059	10 kohms 5% 1/4W
R12	5010079	22 kohms 5% 1/4W	R30	5010117	330 kohms 5% 1/4W
R13	5010506	10 ohms 5% 1/4W	R31	5010072	180 kohms 5% 1/4W
R14	5010070	390 ohms 5% 1/4W	R32	5010059	10 kohms 5% 1/4W
R15	5010059	10 kohms 5% 1/4W	R33	5010049	100 kohms 5% 1/4W
R16	5010059	10 kohms 5% 1/4W	R35	5010049	100 kohms 5% 1/4W
R17	5010049	100 kohms 5% 1/4W	R36	5010153	1.2 kohms 5% 1/4W
R18	5010045	47 kohms 5% 1/4W	R37	5010848	3.3 Mohms 10% 1/4W

C1	4200488	22 µF 20% 25V	C13	4200431	10 µF 20% 16V
C2	4000029	220 pF 5% 63V	C14	4010063	4.7 nF 10% 63V
C3	4130193	22 nF 20% 63V	C15	4200431	10 µF 20% 16V
C4	4200423	2.2 µF 20% 50V	C16	4130179	100 nF 20% 63V
C5	4200403	100 µF -10+100% 25V	C17	4010062	330 pF 10% 400V
C6	4200423	2.2 µF -10+50% 63V	C19	4010060	22 nF -20+80% 40V
C7	4010067	1.5 nF 10% 63V	C20	4130193	22 nF 20% 63V
C8	4100033	3.3 nF 5% 63V	C21	4010027	1 nF 10% 100V
C9	4010067	1.5 nF 10% 63V	C23	4010027	1 nF 10% 100V
C10	4010060	22 nF -20+80% 40V	C24	4010062	330 pF 10% 100V
C11	4000077	47 pF 2% 63V	C25	4000110	82 pF 5% 63V
C12	4010060	22 nF -20+80% 40V			

X1	8030023	400 kHz ±1,0 kHz	L1	8022128	55 mH

P70	7220293	Plug 8/8 pins		3304052	Screen/housing
P71	7220114	Plug 5/4 pins			
P72	7220114	Plug 5/4 pins			
P73	7220209	Plug 6/5 pins			

Socket Panel, 8002515, PC46

R1	5010040	1 kohms 5% 1/4W	R4	5010040	1 kohms 5% 1/4W
R2	5010040	1 kohms 5% 1/4W	R5	5010040	1 kohms 5% 1/4W
R3	5010040	1 kohms 5% 1/4W	R6	5010040	1 kohms 5% 1/4W

L1	8020341	Aerial transformer

FM, 8002519, PC47

R1	5370225	50 kohms 20%	R22	5010448	22 ohms 5% 1/4W
R2	5010053	15 kohms 5% 1/4W	R23	5010044	330 ohms 5% 1/4W
R3	5010000	270 ohms 5% 1/4W	R24	5010067	560 ohms 5% 1/4W
R4	5010053	15 kohms 5% 1/4W	R25	5010070	390 ohms 5% 1/4W
R5	5010040	1 kohms 5% 1/4W	R26	5011009	47 ohms 5% 1/2W
R6	5010144	680 ohms 5% 1/4W	R27	5011009	47 ohms 5% 1/2W
R7	5370225	50 kohms 20%	R29	5010092	220 ohms 5% 1/4W
R8	5010062	68 kohms 5% 1/4W	R30	5010059	10 kohms 5% 1/4W
R9	5370225	50 kohms 20%	R33	5010054	1 Mohms 5% 1/4W
R10	5010062	68 kohms 5% 1/4W	R34	5010091	82 kohms 5% 1/4W
R11	5370225	50 kohms 20%	R35	5010144	680 ohms 5% 1/4W
R12	5010062	68 kohms 5% 1/4W	R36	5370074	10 kohms 20%
R13	5010053	15 kohms 5% 1/4W	R37	5010091	82 kohms 5% 1/4W
R14	5020345	47 ohms 10% 1/4W	R38	5010045	47 kohms 5% 1/4W
R15	5010059	10 kohms 5% 1/4W	R39	5010045	47 kohms 5% 1/4W
R16	5010056	82 ohms 5% 1/4W	R40	5010045	47 kohms 5% 1/4W
R17	5010057	150 ohms 5% 1/4W	R41	5010045	47 kohms 5% 1/4W
R18	5010506	10 ohms 5% 1/4W	R42	5010049	100 kohms 5% 1/4W
R20	5010070	390 ohms 5% 1/4W	R43	5010049	100 kohms 5% 1/4W
R21	5010298	2.7 kohms 5% 1/4W	R44	5010048	4.7 kohms 5% 1/4W

R46	5010065	100 ohms 5% 1/4W	R66	5010063	150 kohms 5% 1/4W
R47	5010000	270 ohms 5% 1/4W	R79	5010045	100 kohms 5% 1/4W
R48	5010065	100 ohms 5% 1/4W	R80	5010045	47 kohms 5% 1/4W
R49	5010041	5.6 kohms 5% 1/4W	R81	5010054	1 Mohms 5% 1/4W
R50	5370058	5 kohms 20%	R82	5010045	47 kohms 5% 1/4W
R51	5010061	56 kohms 5% 1/4W	R83	5010120	220 kohms 5% 1/4W
R52	5010059	10 kohms 5% 1/4W	R84	5010077	470 kohms 5% 1/4W
R53	5010247	1.5 kohms 5% 1/4W	R85	5010045	1 Mohms 5% 1/4W
R55	5011009	47 ohms 5% 1/2W	R86	5010077	470 kohms 5% 1/4W
R56	5011009	47 ohms 5% 1/2W	R87	5010077	470 kohms 5% 1/4W
R57	5010040	1 kohms 5% 1/4W	R200	5010733	5.1 kohms 5% 1/4W
R58	5010154	8.2 kohms 5% 1/4W	R201	5010733	5.1 kohms 5% 1/4W
R59	5370058	5 kohms 20%	R202	5010045	47 kohms 5% 1/4W
R60	5010144	680 ohms 5% 1/4W	R203	5010059	10 kohms 5% 1/4W
R61	5010069	3.9 kohms 5% 1/4W	R204	5370128	100 kohms 20%
R62	5370074	10 kohms 20%	R205	5010075	33 kohms 5% 1/4W
R63	5010040	1 kohms 5% 1/4W	R206	5010065	100 ohms 5% 1/4W
R64	5010067	560 ohms 5% 1/4W	R207	5010059	10 kohms 5% 1/4W
R65	5370074	10 kohms 20%			

C1	4010060	22 nF -20+80% 40V	C28	4000082	3.9 pF ±025 pF 63V
C2	4200476	0.47 µF 20% 50V	C29	4000110	82 pF 5% 63V
C3	4000106	8.2 pF ±0.25 pF 63V	C30	4010041	10 nF -20+80% 40V
C4	4100019	1 nF 2.5% 63V	C33	4200477	4.7 µF 20% 25V
C5	4011022	4.7 nF -20+80% 40V	C34	4200477	4.7 µF 20% 25V
C6	4010087	470 pF 10% 63V	C35	4130215	220 nF 20% 63V
C7	4000099	3.3 pF ±0.25 pF 63V	C36	4200426	1 µF 20% 50V
C8	4011022	4.7 nF -20+80% 40V	C37	4130114	470 nF 10% 100V
C9	4010024	470 pF 10% 100V	C38	4130104	220 nF 20% 100V
C10	4000105	5.6 pF ±0.25 pF 63V	C39	4101007	220 pF ±5% 63V
C11	4010060	22 nF -20+80% 40V	C40	4200099	100 µF -10+100% 16V
C12	4010060	22 nF -20+80% 40V	C41	4200423	2.2 µF 20% 50V
C15	4011022	4.7 nF -20+80% 40V	C42	4130050	6.8 nF 10% 250V
C16	4000107	68 pF 2% 63V	C43	4010041	10 nF -20+80% 40V
C17	4000109	56 pF 2% 63V	C44	4000085	100 pF 2% 63V
C19	4010041	10 nF -20+80% 40V	C47	4200477	4.7 µF 20% 25V
C20	4010041	10 nF -20+80% 40V	C48	4130104	220 nF 20% 100V
C21	4010041	10 nF -20+80% 40V	C51	4200423	2.2 µF 20% 50V
C22	4010024	470 pF 10% 100V	C200	4130190	10 nF 5% 250V
C23	4010041	10 nF -20+80% 40V	C201	4200423	2.2 µF 20% 50V
C24	4000085	100 pF 2% 63V	C202	4010027	1 nF 10% 100V
C25	4000085	100 pF 2% 63V	C203	4100081	2.15 nF 25% 63V
C26	4010041	10 nF -20+80% 40V	C204	4100081	2.15 nF 2.5% 63V
C27	4200431	10 µF 20% 16V			

L1	8020322	OSC.	L7	8020323	MF coil 1
L2	8020321	HF coil 1	L8	8020369	Coil FM
L3	8020320	HF coil 2	L9	8020368	Coil FM
L4	6850127	1.2 µH	L200	8022100	31 mH
L5	8020319	Aerial coil			

BP1	8030014	10.7 MHz ±0.03 MHz	P8	7220300	Plug 17/17 pins
BP2	8030014	10.7 MHz ±0.03 MHz			
BP3	8030014	10.7 MHz ±0.03 MHz			

	3304014	Screen/housing

Master Control Panel, 8002521, PC53

R1	5010065	100 ohms 5% 1/4W	R16	5010658	5.6 Mohms 10% 1/4W
R2	5010061	56 kohms 5% 1/4W	R17	5010079	22 kohms 5% 1/4W
R3	5010041	5.6 kohms 5% 1/4W	R18	5010059	10 kohms 5% 1/4W
R4	5010054	1 Mohms 5% 1/4W	R19	5010059	10 kohms 5% 1/4W
R5	5010054	1 Mohms 5% 1/4W	R20	5210006	3.3 kohms ±33%
R6	5010075	33 kohms 5% 1/4W	R22	5010054	1 Mohms 5% 1/4W
R7	5010049	100 kohms 5% 1/4W	R23	5010045	47 kohms 5% 1/4W
R8	5010045	47 kohms 5% 1/4W	R24	5370049	1 Mohms 20%
R9	5010064	2.2 kohms 5% 1/4W	R26	5010045	12 kohms 5% 1/4W
R10	5010079	22 kohms 5% 1/4W	R27	5010079	22 kohms 5% 1/4W
R11	5010682	2.2 ohms 5% 1/4W	R28	5010079	22 kohms 5% 1/4W
R12	5010092	220 ohms 5% 1/4W	R29	5010079	22 kohms 5% 1/4W
R13	5010247	1.5 kohms 5% 1/4W	R32	5010079	22 kohms 5% 1/4W
R14	5010298	2.7 kohms 5% 1/4W	R33	5010079	22 kohms 5% 1/4W
R15	5010046	12 kohms 5% 1/4W	R34	5010079	22 kohms 5% 1/4W

R35	5010079	22 kohms 5% 1/4W	R58	5010045	47 kohms 5% 1/4W
R36	5010079	22 kohms 5% 1/4W	R59	5010120	220 kohms 5% 1/4W
R37	5010079	22 kohms 5% 1/4W	R60	5010054	1 Mohms 5% 1/4W
R38	5010079	22 kohms 5% 1/4W	R61	5010120	220 kohms 5% 1/4W
R39	5010079	22 kohms 5% 1/4W	R62	5010045	47 kohms 5% 1/4W
R40	5010079	22 kohms 5% 1/4W	R63	5010048	4.7 kohms 5% 1/4W
R41	5010079	22 kohms 5% 1/4W	R64	5010077	470 kohms 5% 1/4W
R44	5010054	1 Mohms 5% 1/4W	R65	5010067	560 ohms 5% 1/4W
R45	5010079	22 kohms 5% 1/4W	R69	5010073	390 kohms 5% 1/4W
R46	5010045	47 kohms 5% 1/4W	R70	5010073	390 kohms 5% 1/4W
R47	5010075	33 kohms 5% 1/4W	R71	5010075	33 kohms 5% 1/4W
R48	5010049	100 kohms 5% 1/4W	R72	5010075	33 kohms 5% 1/4W
R49	5010071	560 kohms 5% 1/4W	R73	5010117	330 kohms 5% 1/4W
R50	5010054	1 Mohms 5% 1/4W	R74	5010049	100 kohms 5% 1/4W
R52	5010059	10 kohms 5% 1/4W	R75	5010071	560 kohms 5% 1/4W
R53	5010077	470 kohms 5% 1/4W	R76	5010045	47 kohms 5% 1/4W
R54	5010077	470 kohms 5% 1/4W	R77	5010144	680 ohms 5% 1/4W
R55	5010069	3.9 kohms 5% 1/4W	R78	5010144	680 ohms 5% 1/4W
R56	5010059	10 kohms 5% 1/4W	R79	5010048	4.7 kohms 5% 1/4W
R57	5010045	47 kohms 5% 1/4W	R80	5010049	100 kohms 5% 1/4W

C1	4010062	330 pF 10% 100V	C13	4130237	680 nF 20% 63V
C2	4000085	100 pF 2% 63V	C14	4010061	2.2 nF 10% 63V
C3	4010027	1 nF 10% 100V	C15	4010061	2.2 nF 10% 63V
C4	4200396	220 µF -10+50% 16V	C16	4200426	1 µF 20% 50V
C5	4130179	100 nF 20% 63V	C18	4200484	10 µF 20% 25V
C6	4130179	100 nF 20% 63V	C19	4010024	470 pF 10% 100V
C7	4010031	680 pF 10% 100V	C20	4130210	47 nF 20% 63V
C8	4130210	47 nF 20% 63V	C21	4010027	1 nF 10% 100V
C9	4000077	47 pF 2% 63V	C22	4200322	4.7 µF -10+50% 63V
C10	4130226	220 nF 10% 63V	C23	4000029	220 pF 5% 63V
C11	4000029	220 pF 5% 63V	C25	4130179	100 nF 20% 63V
C12	4000029	220 pF 5% 63V			

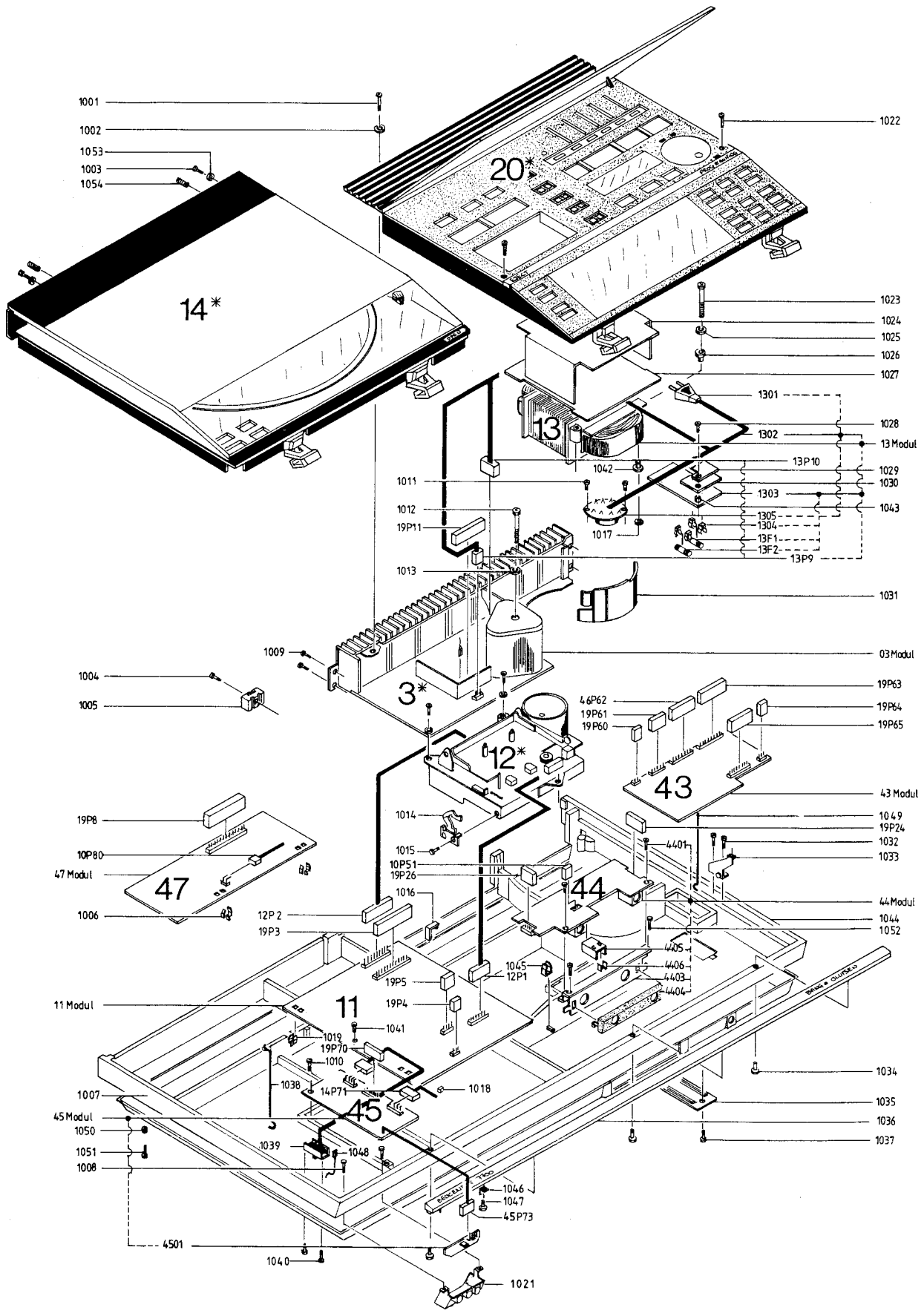
P1	7210337	Socket 10 pol.		7200068	Socket 28 pol.
P2	7210337	Socket 10 pol.			
P3	7210344	Socket 8 pol.			
P4	7210344	Socket 8 pol.			

IL1	8230057	30 mA	X1	8030023	400 kHz ±1.0 kHz
IL2	8230057	30 mA			
IL3	8230057	30 mA			

L1	8022128	55 mH		3302352	Screen/housing
				7500171	Contact pin

LIST OF MECHANICAL PARTS (Bottom Chassis)

03Modul	8002532	PC, power ampl. + power supply			
1001	2039011	Screw AM3 x 25 black	1029	3302318	Screen
1002	2622306	Washer 3.2 black	1030	3172085	Insulating piece
1003	2038081	Screw M3 x 8	1031	3302306	Screen
1004	2013201	Screw 2.9 x 6.5	1032	2015089	Screw 3.5 x 9.5 black
1005	3152006	Holder	1033	2542543	Bracket
1006	3152260	Holder	1034	2038086	Screw M3 x 20
1007	3413831	Cabinet, self-adhesive, teak	1035	3164338	Cover
	3413833	Cabinet, self-adhesive, rosewood	1036	2568671	Moulding
			1037	2013099	Screw 2.9 x 6.5 black
	3413834	Cabinet, self-adhesive, oak	1038	2850118	Arm
	3413835	Cabinet set, self-adhesive, white	1039	6275500	Set of wires with
			1040	2036035	Screw AM2.6 x 4 black
1008	2015090	Screw 3.5 x 6.3 black	1041	2015094	Screw M3.5 x 6.5 black
1009	2015089	Screw 3.5 x 9.5 black	1042	2938154	Bushing
1010	2015094	Screw 3.5 x 6.5 black	1043	2938143	Spacer
1011	2015089	Screw 3.5 x 9.5 black	1044	3114182	Chassis – rosewood
1012	2084004	Screw 4.0 x 6.5		3114201	Chassis – teak
1013	2622022	Washer 4.3		3114202	Chassis – oak
1014	2542542	Arm		3114203	Chassis – white
1015	2039033	Screw M3 x 20	1045	3152260	Holder
1016	3152259	Holder	1046	7500174	Pin
1017	2380016	Washer M4	1047	2011305	Screw 2.2 x 3.2
1018	2576050	Spacer	1048	6030453	Wire with plug
1019	3152260	Holder	1049	2850096	Arm
1021	3152330	Holder	1050	3035028	Rubber foot
1022	2039037	Screw AM3 x 16	1051	2013062	Screw 2.9 x 6.5
1023	2015096	Screw M3.5 x 38	1052	2015089	Screw 3.5 x 9.5 black
1024	3302305	Screen	1053	2622306	Washer 3.2 black
1025	2622022	Washer 4.3	1054	2072707	Threaded pin M3 x 6
1026	2938154	Bushing	10P51	6275485	Set of wires P51/49
1027	3172082	Insulating piece	10P80	6274050	Set of wires P80/81
1028	2015088	Screw M3.5 x 16 black			
11Modul	8004298	PC, tape			
12P1	6275440	Set of wires with socket		3152214	Cable binder
12P2	6275441	Set of wires with socket			
13Modul	8013203	Mains transformer	1305	7400119	Voltage switch
1301	6271101	Mains lead	13F1	6600022	Fuse 1.6 A – T/250
1302	6275407	Set of wires	13F2	6600022	Fuse 1.6 A – T/250
1303	8002373	Fuse holder	13P9	6275421	Set of wires P9 & P10
1304	7500002	Fuse holder	13P10	6275421	Set of wires P9 & P10
14P71	6275490	Wire bundle			
19Modul	6275488	Mains wire bundle	19P26	7210364	Socket/housing 9/9 contacts
19P3	7210369	Socket/housing 20/20 contacts	19P60	7210363	Socket/housing 3/3 contacts
			19P61	7210371	Socket/housing 8/8 contacts
19P4	7210366	Socket/housing 1/4 contacts	19P63	7210360	Socket/housing 16/16 contacts
19P5	7210367	Socket/housing 3/6 contacts			
19P8	7210370	Socket/housing 15/17 contacts	19P64	7210372	Socket/housing 4/4 contacts
			19P65	7210361	Socket/housing 5/8 contacts
19P11	7210359	Socket/housing 13/19 contacts	19P70	7210371	Socket/housing 8/8 contacts
				7500170	Contact pin
19P24	7210362	Socket/housing 2/11 contacts			
43Modul	8002512	PC, switch			
44Modul	8002513	PC, Power backup	4404	3164450	Cover
4401	2039015	Screw M3 x 6	4405	3358177	Heat sink
4403	2542589	Bracket	4406	2819157	Spring
45Modul	8002514	PC, remote	45P73	7210164	Socket/housing 6/5 contacts
4501	6140883	Mounting plate			
46P62	7210197	Socket/housing 13/12 contacts			
47Modul	8002519	PC, FM			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19P65
19P60
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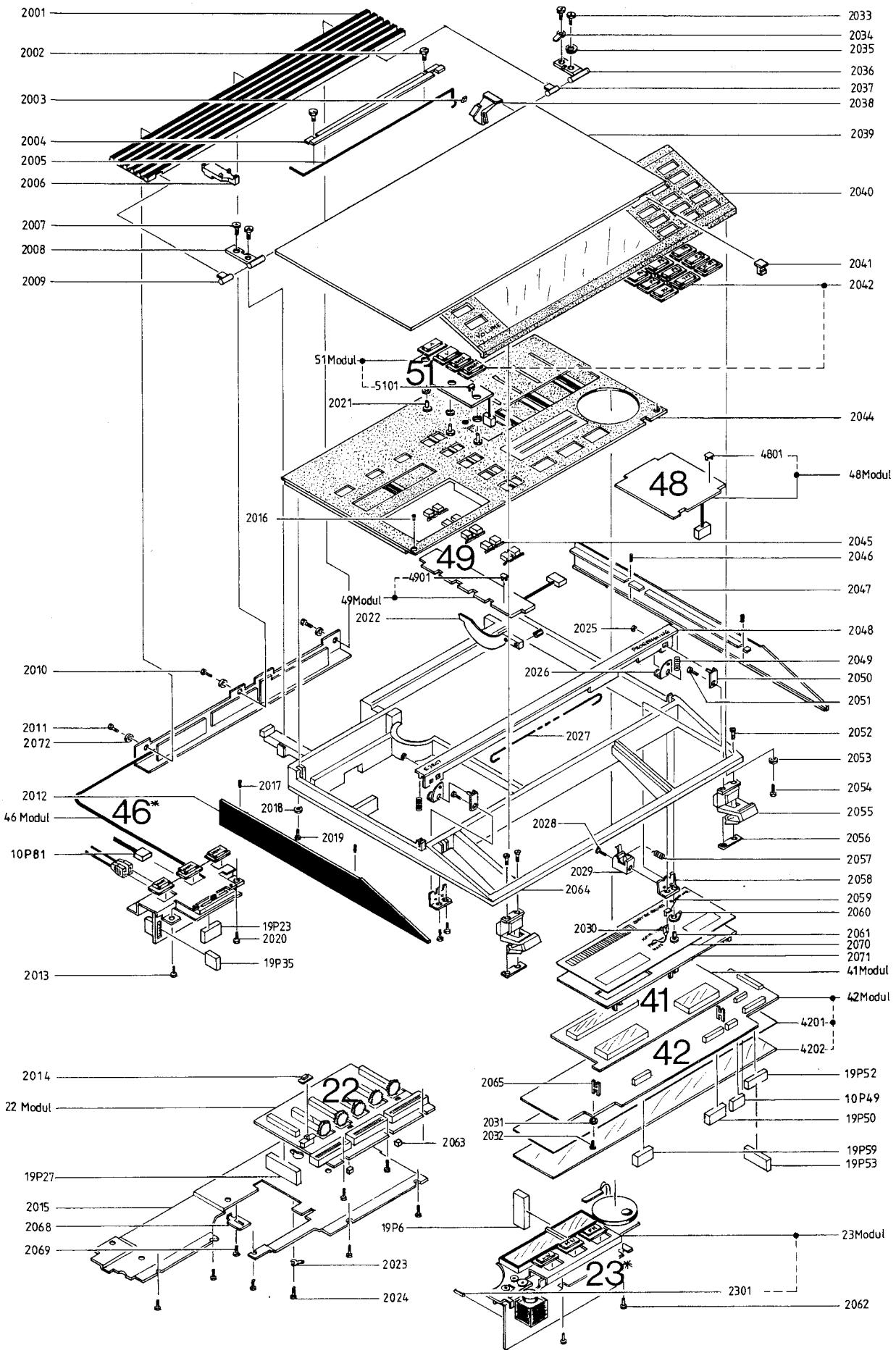
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41Modul
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22 Modul
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10P49
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23Modul
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Top Chassis

10P49	6275485	Set of wires P51/49

19P6	7210373	Socket/housing 12/15 contacts	19P52	7210375	Socket/housing 6/9 contacts
19P23	7210364	Socket/housing 9/9 contacts	19P53	7210365	Socket/housing 10/10 contacts
19P27	7210374	Socket/housing 17/19 contacts	19P59	7210375	Socket/housing 10/10 contacts
19P35	7210376	Socket/housing 3/6 contacts		7500170	Contact pin
19P50	7210377	Socket/housing 13/13 contacts			

2001	2568698	Moulding	2036	3030055	Hinge
2002	2015093	Screw 3.5 x 13 black	2037	3030041	Hinge
2003	3035027	Slider	2038	3011010	Friction plate
2004	3014048	Guide plate	2039	2568752	Lid
2005	2812083	Spring	2040	3168242	Panel
2006	3010015	Stop	2041	3034039	Lock
2007	2015066	Screw M3.5 x 16	2042	2775917	Set of buttons
2008	3030043	Hinge	2044	3168241	Panel
2009	3030041	Hinge	2045	2775815	Set of buttons
2010	2039033	Screw M3 x 6	2046	2070034	Threaded pin M3 x 5
2011	2013215	Screw M2.9 x 16	2047	2568764	Side piece
2012	2568542	Side piece	2048	2568768	Moulding
2013	2015089	Screw 3.5 x 9.5 black	2049	2810097	Spring
2014	2775350	Button	2050	2530389	Bracket
2015	3302301	Screen	2051	2039007	Screw AM3 x 3
2016	3010007	Stop	2052	2013107	Screw M2.9 x 9.5 black
2017	2070034	Threaded pin M3 x 5	2053	2622306	Washer 3.2 black
2018	2622306	Washer 3.2 black	2054	2013067	Screw M2.9 x 13 black
2019	2013089	Screw 2.9 x 7.9	2055	2030054	Hinge
2020	2015089	Screw 3.5 x 9.5 black	2056	2641092	Clamp
2021	2039043	Screw AM3 x 4	2057	2810008	Spring
2022	3011011	Arm	2058	2530356	Bracket
2023	7530090	Contact tag	2059	7500145	Contact piece
2024	2015091	Screw 3.5 x 9.5	2060	7530087	Solder tag
2025	2390001	Locking ring 2.3	2061	2013089	Screw 2.9 x 7.9
2026	2854070	Arm	2062	2015091	Screw 3.5 x 9.5 black
2027	2850095	Connection piece	2063	2576050	Spacer
2028	2039007	Screw AM3 x 3	2064	3114140	Chassis
2029	2530388	Bracket	2065	2930086	Spacer
2030	6250093	Socket with wire	2068	2816199	Spring
2031	2938081	Rubber bushing	2069	2039026	Screw AM3 x 4 black
2032	2015089	Screw 3.5 x 9.5 black	2070	3199062	Film
2033	2015066	Screw M3.5 x 16 black	2071	3131207	Frame
2034	7530087	Solder tag	2072	2625002	Washer 3.2
2035	2622304	Washer			

22Modul	8002531	PC, preset

23Modul	8002534	PC, AM

41Modul	8002510	PC, display

42Modul	8002588	PC, microcomputer	4202	3302364	Screen
4201	3170207	Insulating piece			

46Modul	8002515	PC, speakers switch + socket panel

48Modul	8002516	PC, primary operation	4801	7500148	Contact spring

49Modul	8002517	PC, secondary operation	4901	7500148	Contact spring

51Modul	8002518	PC, volume control	5101	7500148	Contact spring

Bang&Olufsen

Chassis, Record Player

1401	2726142	Turntable	1436	2514028	Hook
1402	2853097	Arm	*1 1437	2815012	Leaf spring
1403	2038948	Screw M3 x 16	1438	2070400	Threaded pin M2 x 3
1405	2034231	Screw AM2 x 4	1439	2722022	Pulley
1406	2046910	Screw	1440	8954870	Pick-up MMC4 (replacement)
1407	2036213	Screw AM2.6 x 8			
1408	2622271	Washer 2.7	1441	2732037	Dirve belt
1409	2938137	Rubber bushing	1442	3458268	Top plate
1410	2930074	Brass bushing	1443	2775866	Moulding
1413	3152272	Holder	1444	2991023	Tap
1414	2039903	Screw AM3 x 5	1445	2361060	Cylinder pin
1415	7500145	Contact piece	1446	3956004	Connection rod
1417	6030453	Socket with wire	1447	2361060	Cylinder pin
1419	3180767	Washer	1448	3152333	Holder
1420	2042034	Screw AM4 x 10	1449	2039903	Screw AM3 x 5
1421	2640031	Clamp	1450	2810086	Spring
1422	2938129	Bushing	1451	2039903	Screw AM3 x 5
1423	2514028	Hook	1452	2510067	Wire holder
*1 1424	2815012	Leaf spring	1453	2039903	Screw AM3 x 5
1425	2640032	Clamp	1454	3152063	Holder
1426	2938100	Bushing	1455	2622231	Mica sheet
1427	2622228	Washer	1456	2013201	Screw 2.9 x 6.5
1428	2072101	Lifting screw	1457	2992077	Tap
1429	2854076	Lifting arm	1458	2039903	Screw AM3 x 5
1430	2622310	Washer	1459	2850118	Arm
1431	2013200	Screw	1460	2384010	Nut
1432	3030054	Hinge	1461	3152332	Holder
1433	2641092	Clamp	1462	2850109	Arm
1434	2810091	Spring	1463	3035027	Plastic foot
*2 1435	2815007	Leaf spring	1464	2622264	Cover washer

14M1	8400113	Motor	6275490	Wire bundle with plug for green light
14P21	7210115	Socket/housing 5 contacts		
14S1	7400251	Switch		

15P17	6270207	Set of wires with socket	15P19	6273948	Set of wires with socket

17Modul	8005084	PC, phono

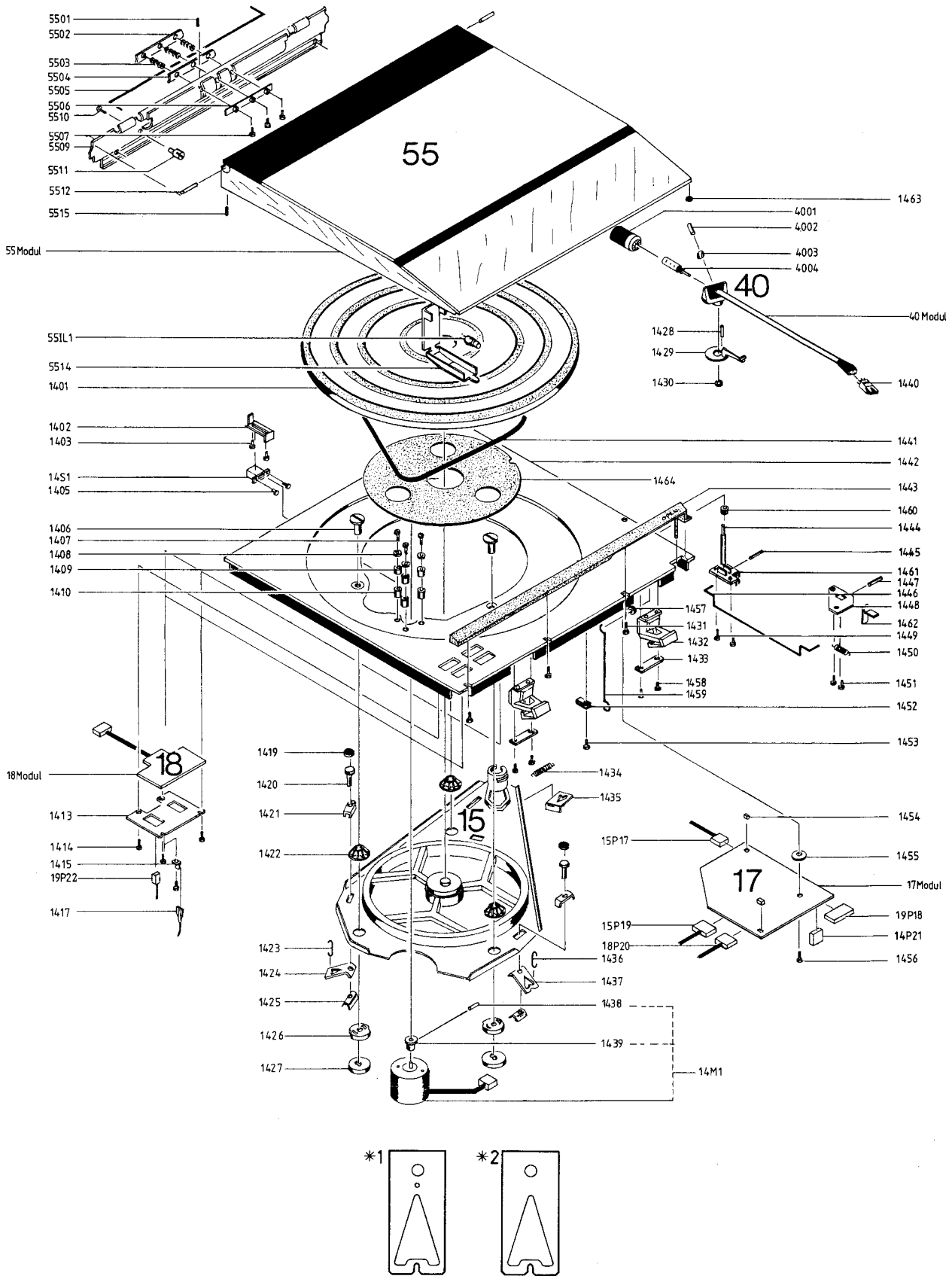
18Modul	8005085	PC, operation	1801	7500148	Contact spring
18P20	7210128	Socket/housing 7/6 contacts			

19P18	7210365	Socket/housing 10/10 contacts	19P22	7210368	Socket/housing 2 contacts
				7500114	Contact pin

40Modul	2850002	Pick-up arm	4003	2576114	Adjustment bushing
4001	3342083	Counterweight	4004	2834045	Shaft
4002	2070035	Threaded pin M3 x 6			

55Modul	3164452	Dust cover	5507	2039046	Screw AM3 x 12
5501	2070036	Pin M3 x 4	5509	2568673	Moulding
5502	3152329	Holder	5510	2038081	Screw AM3 x 8
5503	2622013	Spring washer 3.2	5511	2934097	Bushing
	2624007	Tooth-lock washer 3.2	5512	2361061	Pin
5504	3011015	Friction plate	5514	3152331	Holder
5505	2812092	Spring	5515	2070036	Pin M3 x 4
5506	3011016	Friction plate			

55IL1	8230077	Bulb 12V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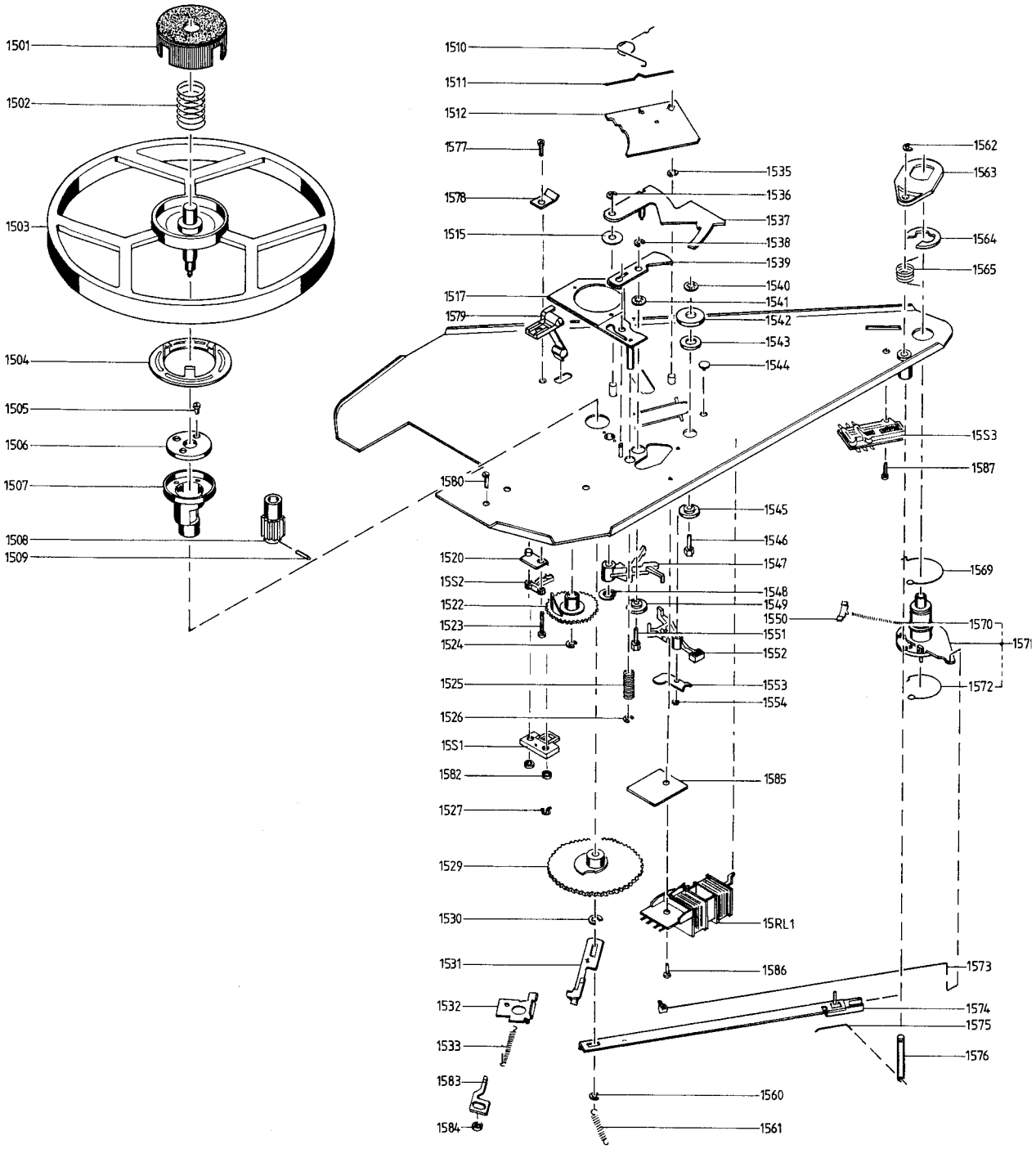
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Record Player Deck

1501	3014039	Adaptor	1545	2803005	Washer
1502	2818059	Spring	1546	2992048	Tap
1503	2794075	Flywheel	1547	2853058	Arm
1504	3014040	Adaptor ring	1548	2390084	E-ring 5.5
1505	2038220	Screw AM3 x 12	1549	2803005	Washer
1506	2905075	Bearing ring	1550	2816162	Slider
1507	3150037	Bearing bushing	1551	2992076	Tap
1508	2700024	Gear-wheel	1552	2853059	Arm
1509	2361048	Locking pin	1553	3164387	Cover
1510	2819145	Spring	1554	2380011	Nut M3
1511	2819155	Spring	1560	2390002	E-ring 3.2
1512	3014041	Friction plate	1561	2810082	Spring
1515	2622285	Cover	1562	2390002	E-ring 3.2
1517	3014052	Adaptor plate	1563	2623034	Lifting plate
1520	2576129	Spacer	1564	2938141	Lock
1522	2700026	Gear wheel	1565	2812082	Spring
1523	2038229	Screw M3x18	1567	7459018	Silente contact
1524	2390002	E-ring 3.2	1569	2819106	Spring
1525	2818068	Spring	1570	2810095	Spring
1526	2390002	E-ring 3.2	1571	2938153	Bearing complete
1527	3152118	Lead holder	1572	2819107	Spring
1529	3017014	Camwheel	1573	2850105	Arm
1530	2390002	E-ring 3.2	1574	2850040	Arm
1531	2542511	Bracket	1575	2430326	Arm
1532	2542512	Bracket	1576	2850093	Bar
1533	2818069	Spring	1577	2039908	Screw M3 x 10
1535	2390002	E-ring 3.2	1578	2819160	Spring
1536	2390002	E-ring 3.2	1579	2853091	Arm
1537	3014031	Arm	1580	2039013	Screw M3 x 16
1538	2990001	E-ring 2.3	1582	2380011	Nut M3
1539	3014043	Stop	1583	3031068	Bracket
1540	2395030	Locking disc.	1584	2389061	Adjustment nut
1541	2395030	Locking disc.	1585	3170203	Insulation piece
1542	2938084	Washer	1586	2039908	Screw M3 x 10
1543	2622198	Washer	1587	2039908	Screw M3 x 10
1544	3035020	Plastic foot			

15RL1	8024060	Coil complete
	6273948	Set of wires for 15RL1
	7500135	Contact spring

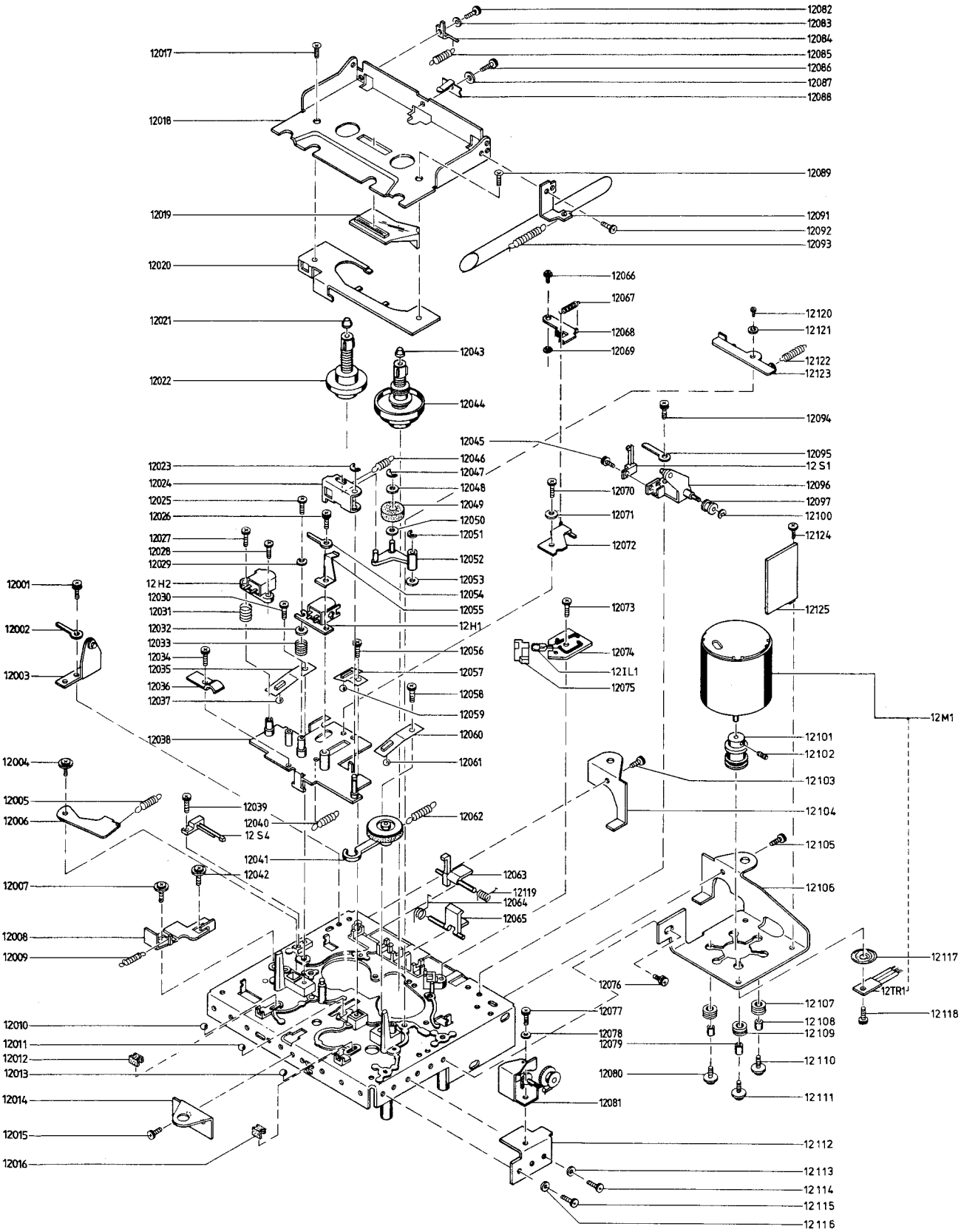
15S1	3131205	Reed-contact	15S2	7402081	Micro-switch

Tape Deck, Top

12001	2036017	Screw M2.6 x 4	12062	2810104	Spring
12002	7530088	Solder tag	12063	2853062	Sensor
12003	2530382	Bracket	12064	2818062	Spring
12004	2036030	Screw 2.6 x 8	12065	2853061	Sensor
12005	2810110	Spring	12066	2036023	Screw 2.6 x 7
12006	2530377	Bracket	12067	2810113	Spring
12007	2036028	Screw 2.6 x 6	12068	2853068	Arm
12008	2542534	Bracket	12069	2932093	Bushing
12009	2810101	Spring	12070	2036021	Screw M2.6 x 3
12010	2917018	Ball 2.5	12071	2624045	Washer
12011	2917018	Ball 2.5	12072	2542538	Bracket
* 12012	3010017	Stop	12073	2036029	Screw 2.6 x 8
12013	2917018	Ball 2.5	12074	6140766	Mounting plate
12014	2530380	Bracket	12075	3151189	Lamp housing
12015	2036018	Screw M2.6 x 5	12076	2036022	Screw M2.6 x 5
* 12016	3010017	Stop	12077	2036022	Screw M2.6 x 5
12017	2034047	Screw M2 x 4 black	12078	2624045	Washer
12018	3151190	Holder	12079	2932089	Brass bushing
12019	3199058	Light conductor	12080	2036023	Screw M2.6 x 7
12020	3151188	Bracket	12081	2542506	Damping system
12021	3164380	Cover	12082	2036019	Screw M2.6 x 3 black
12022	2932092	Supply reel	12083	2624045	Screw
12023	2390078	E-ring 2.0	12084	2548172	Bracket
12024	2853063	Arm	12085	2810103	Spring
12025	2034048	Screw M2 x 5	12086	2034052	Screw M2 x 2 black
12026	2034049	Screw M2 x 4	12087	2622298	Washer
12027	2034050	Screw M2 x 7	12088	2816178	Leaf spring
12028	2034207	Screw M2 x 5	12089	2034047	Screw M2 x 4 black
12029	2622300	Washer	12091	2530379	Bracket
12030	2036029	Screw 2.6 x 8	12092	2034052	Screw M2 x 2 black
12031	2812087	Spring	12093	2810100	Spring and cord
12032	2622294	Washer	12094	2036017	Screw M2.6 x 4
12033	2812088	Spring	12095	7530088	Solder tag
12034	2036019	Screw M2.6 x 3 black	12096	2542536	Holder
12035	2816175	Leaf spring	12097	2932088	Cord pulley
12036	3151191	Wire holder	12100	2390056	E-ring 1.5
12037	2917018	Ball 2.5	12101	2722027	Pulley
12038	3112244	Chassis	12102	2072008	Threaded pin
12039	2034051	Screw 2 x 8	12103	2036021	Screw M2.6 x 3
12040	2810108	Spring	12104	2542535	Bracket
12041	2804039	Arm	12105	2036021	Screw M2.6 x 3
12042	2036028	Screw 2.6 x 6	12106	2542537	Bracket
12043	3164380	Cover	12107	2932090	Rubber bushing
12044	2932091	Take-up reel	12108	2932089	Brass bushing
12045	2036020	Screw M2.6 x 4	12109	2932090	Rubber bushing
12046	2810109	Spring	12110	2036023	Screw M2.6 x 7
12047	2390078	E-ring 2.0	12111	2036023	Screw M2.6 x 7
12048	2622297	Washer	12112	2530381	Bracket
12049	2804041	Thrust roller	12113	2624013	Washer
12050	2622297	Washer	12114	2039039	Screw M3 x 4
12051	2390078	E-ring 2.0	12115	2039039	Screw M3 x 4
12052	2853067	Arm	12116	2624013	Washer
12053	2622297	Washer	12117	2622245	Plastic washer
12054	7530089	Solder tag	12118	2034207	Screw M2 x 5
12055	2816176	Bracket	12119	2818067	Spring
12056	2036029	Screw 2.6 x 8	12120	2034051	Screw 2 x 8
12057	2816177	Leaf spring	12121	2932095	Bushing
12058	2036029	Screw 2.6 x 8	12122	2810128	Spring
12059	2917018	Ball 2.5	12123	2853090	Arm
12060	2816175	Leaf spring	12124	2013099	Screw 2.9 x 1.5
12061	2917018	Ball 2.5	12125	8004286	Noise filter

12H1	8600054	Tape head	12H2	8600055	Erase head
12IL1	8230060	Lamp			
12M1	8400101	Motor			
12S1	7410018	Switch	12S4	7410019	Switch
12TR1	8320429	Transistor			

* Replacing stops 12012/12016 new stops are to be glued with IS 12 (code no. 3980033)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12062
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12006
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12S4
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12042
12063
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12007
12119
12064
12065
12008
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12009
12076
12TR1
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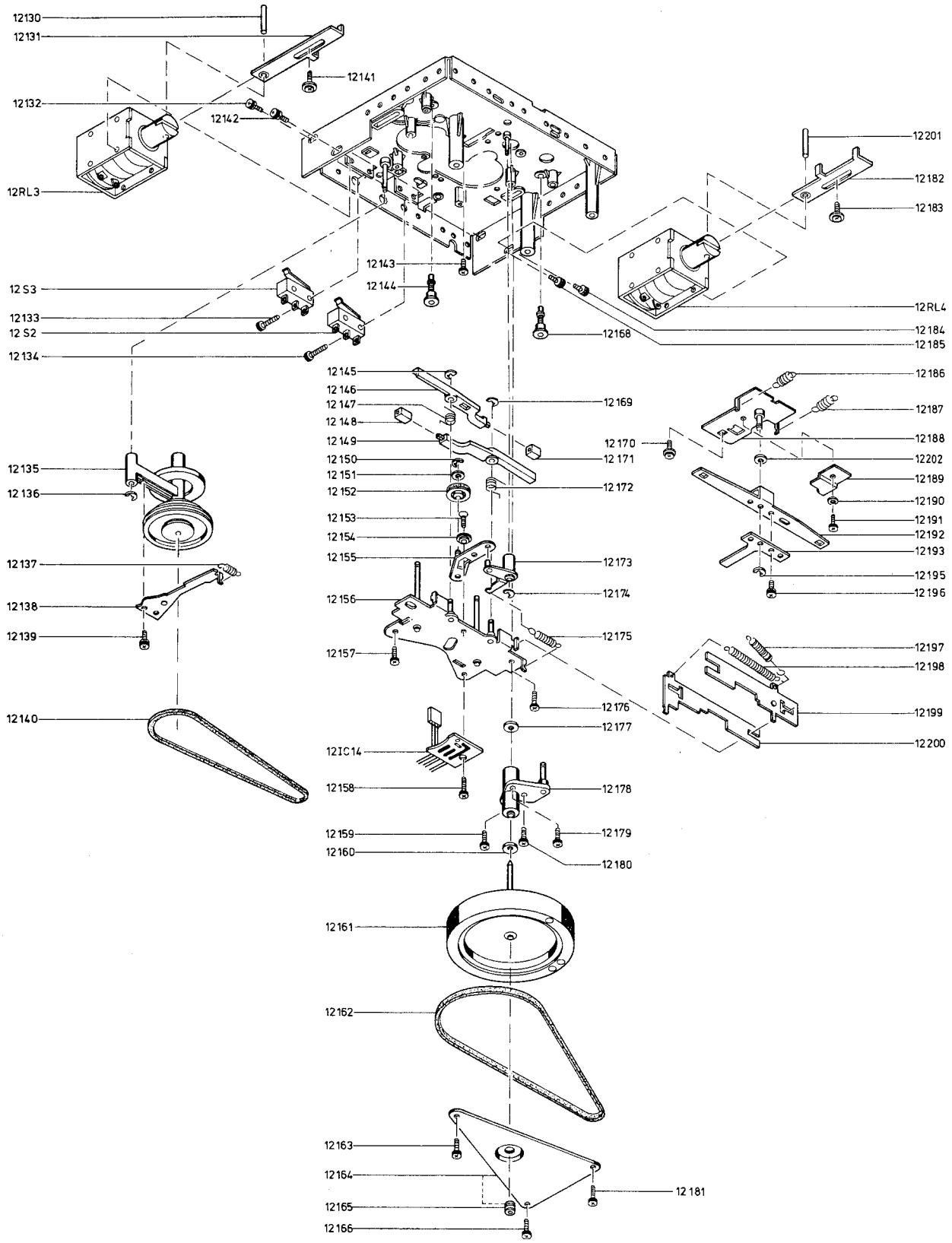
Bang&Olufsen



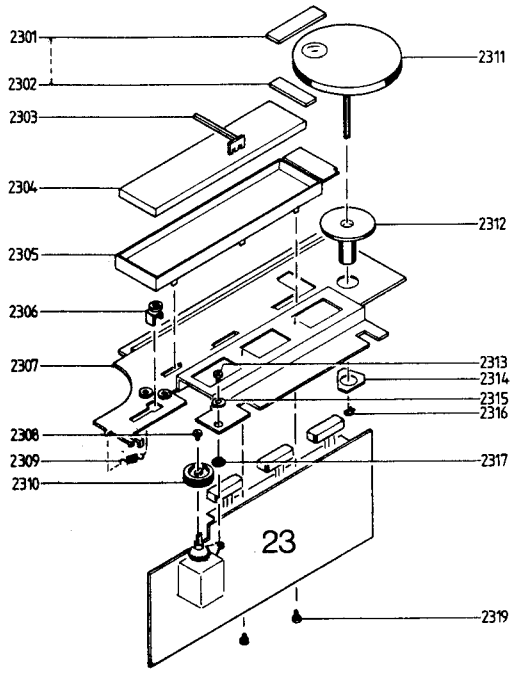
Tape Deck, Bottom

12130	2361055	Pin	12166	2036027	Screw 2.6 x 10
12131	2894046	Arm	12168	2994023	Guide pin
12132	2038063	Screw M3 x 5	12169	2390078	E-ring 2.0
12133	2036026	Screw M2.3 x 10	12170	2036025	Screw M2.6 x 6.5
12134	2036026	Screw M2.3 x 10	12171	2938161	Brake block
12135	2724059	Cluth	12172	2818066	Spring
12136	2390073	E-ring 2.5	12173	2854077	Arm
12137	2810099	Spring	12174	2390078	E-ring 2.0
12138	2530378	Bracket	12175	2810102	Spring
12139	2036010	Screw M2.6 x 8	12176	2036027	Screw 2.6 x 10
12140	2732047	Belt	12177	2622296	Plastic washer
12141	2036030	Screw 2.6 x 8	12178	3114148	Bearing
12142	2038063	Screw M3 x 5	12179	2036024	Screw M2.6 x 6
12143	2034051	Screw 2 x 8	12180	2036024	Screw M2.6 x 6
12144	2994023	Guide pin	12181	2036027	Screw 2.6 x 10
12145	2390078	E-ring 2,0	12182	2894047	Arm
12146	2853065	Arm	12183	2036030	Screw 2.6 x 8
12147	2818065	Spring	12184	2038063	Screw M3 x 5
12148	2938161	Brake block	12185	2038063	Screw M3 x 5
12149	2853064	Arm	12186	2810107	Spring
12150	2390056	E-ring 1.5	12187	2810107	Spring
12151	2622299	Washer	12188	3112248	Bracket
12152	2804040	Wheel	12189	2542539	Bracket
12153	2034053	Screw M2 x 4	12190	2624045	Washer
12154	2932087	Bushing	12191	2036021	Screw M2.6 x 3
12155	2851109	Arm	12192	2853066	Arm
12156	3112246	Chassis	12193	3014049	Arm
12157	2036027	Screw 2.6 x 10	12195	2390073	E-ring 2.5
12158	2036027	Screw 2.6 x 10	12196	2036022	Screw M2.6 x 5
12159	2036024	Screw M2.6 x 6	12197	2810105	Spring
12160	2622295	Plastic washer	12198	2810106	Spring
12161	2794081	Flywheel	12199	3014050	Bracket
12162	2732048	Belt	12200	3014051	Bracket
12163	2036027	Screw 2.6 x 10	12201	2361055	Pin
12164	3112247	Holder	12202	2622322	Washer
12165	2991021	Bearing			

12IC14	8004216	PC complete			
12RL3	6840254	Solenoid	12RL4	6840254	Solenoid
12S2	7410020	Switch	12S3	7410020	Switch

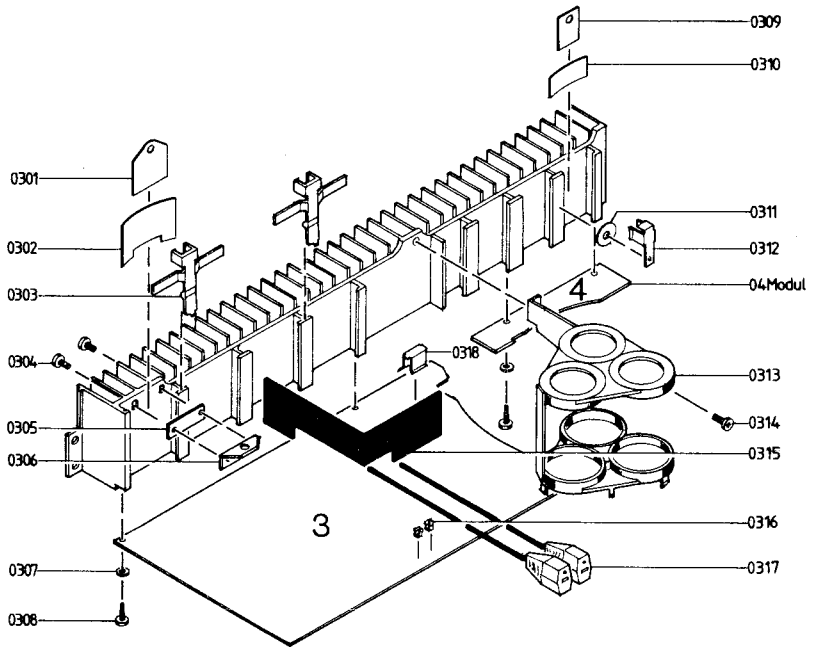
Bang&Olufsen

AM Module, 8002534



2301	3120253	Mounting plate	2311	2794083	Dial wheel
2302	3120253	Mounting plate	2312	2905066	Bearing
2303	3190078	Pointer	2313	2036016	Screw AM2.6 x 6
2304	3370124	Light conductor	2314	2395035	Spire
2305	3131170	Housing	2315	2622041	Fibre washer 3.2
2306	2542514	Cord pulley	2316	2390004	Circlip UG3 x 0.6
2307	3124076	Bracket	2317	2938026	Bushing
2308	2036201	Screw AM2.6 x 3	2319	2039007	Screw AM3 x 3
2309	2810086	Spring		3955016	Dial cord
2310	2724056	Cord wheel			

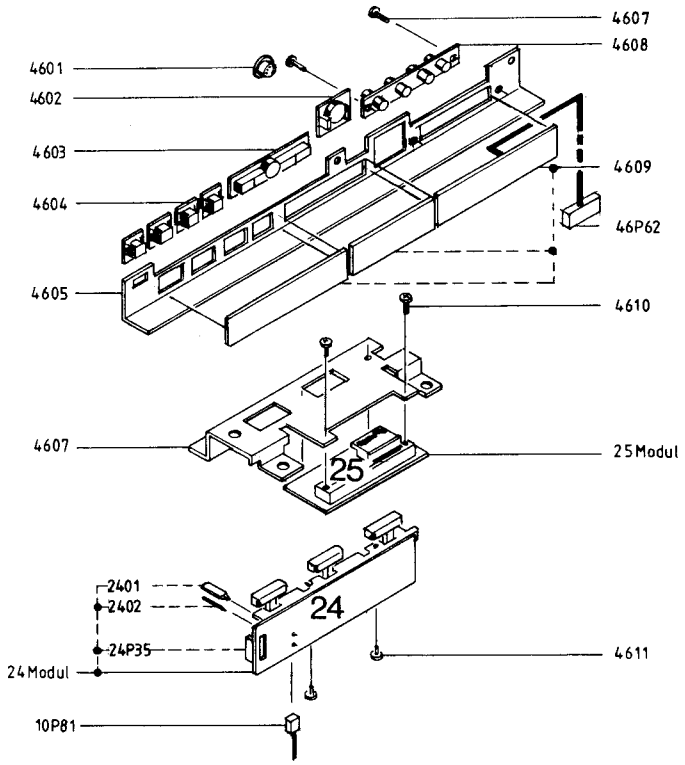
PC, Power Amplifier and Power Supply, 8002532



0301	3170169	Mica sheet	0310	2816179	Holder spring
0302	2816120	Holder spring	0311	2622231	Mica sheet
0303	3152257	Holder	0312	3152280	Holder
0304	2039015	Screw M3 x 16	0313	3152262	Holder
0305	3170152	Insulating piece	0314	2039015	Screw M3 x 6
0306	2542508	Bracket	0315	3358146	Heatsink
0307	2622052	Fibre washer 3.2	0316	7500002	Fuse holder
0308	2039028	Screw AM3 x 8 black	0317	6100054	Wire with socket
0309	2622248	Mica sheet	0318	2816169	Holder spring

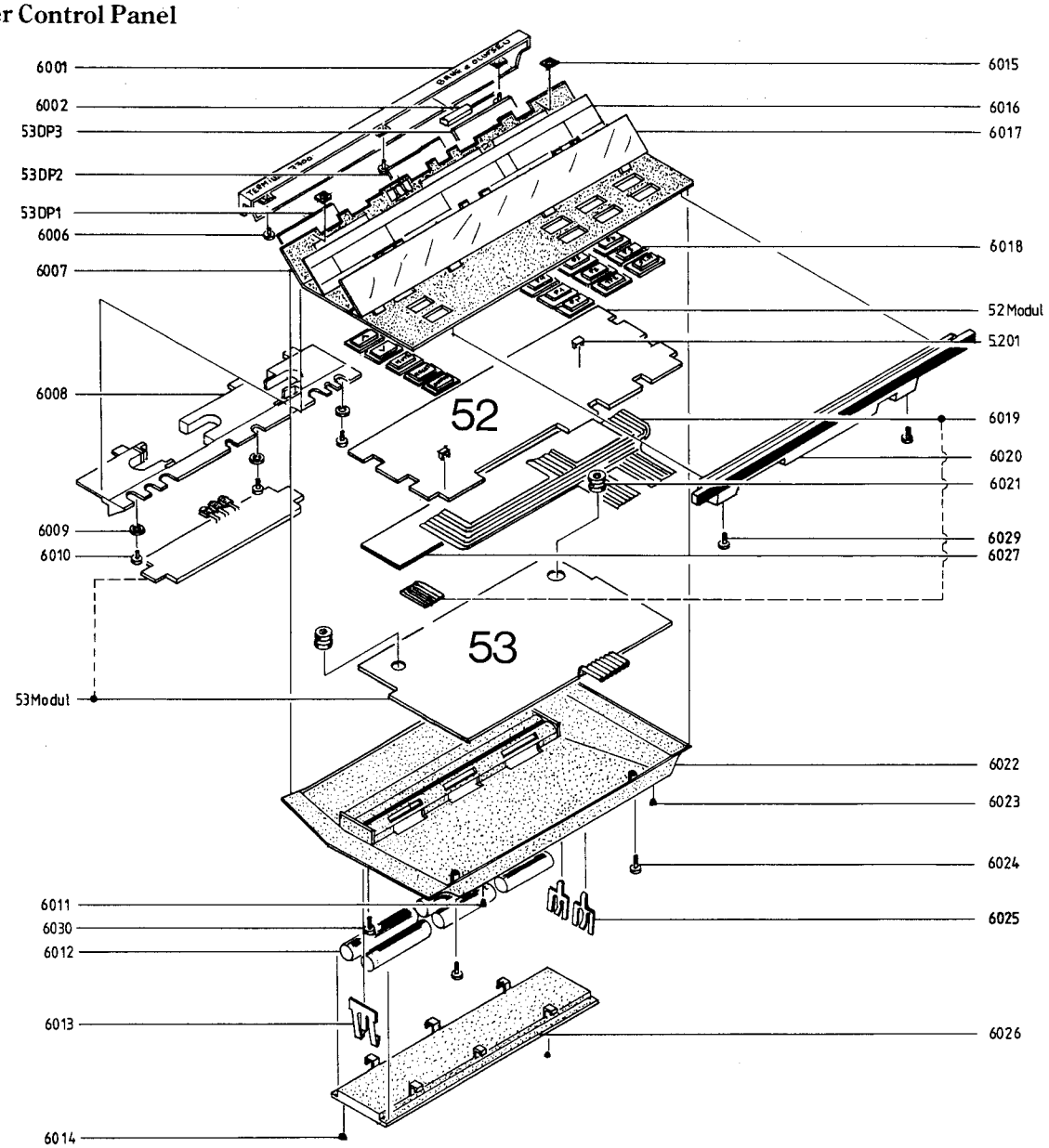
04Modul	8002413	PC, power supply

Speaker Switch and Socket Panel, 8002515



10P81	6274050	Set of wires P80/81			
24Modul	8002540	PC, speaker switch	2402	7500100	Pin, round
2401	7500101	Pin, flat	24P35	7220308	Socket
25Modul	8002565	PC, level			
4601	7220265	Short circuit socket	4607	2039026	Screw AM3 x 4
4602	7210269	Socket 7 contacts	4608	7210399	Socket panel phono
4603	7210292	Socket panel AM/FM	4609	6140884	Mounting plate, set
4604	7210378	Socket 3 contacts	4610	2039007	Screw AM3 x 3
4605	2530423	Bracket	4611	2039007	Screw AM3 x 3
4606	3124075	Bracket			
46P62	6275086	Wire bundle			

Master Control Panel



52Modul	8002520	PC, operation	5201	7500149	Connection spring
53Modul	8002521	PC, remote			
53DP1	8330061	Display »MUTE«	53DP3	8330060	Display »RECORD«
	3152369	Holder – small		3152369	Holder – small
	3152368	Holder – big		3152368	Holder – big
53DP2	8330062	Display »TP8«		7500166	Contact rubber
	3152369	Holder – small			
	3152368	Holder – big			
6001	3322086	Window	6016	3199061	Film
6002	8330088	Receiver diode	6017	3322093	Window
6006	2039020	Screw AM3 x 5 black	6018	2775931	Set of buttons
6007	3168243	Panel	6019	6140897	PC, flexible
6008	3370140	Light conductor	6020	2568692	Moulding
	3947454	Black tape	6021	2938125	Rubber bushing
6009	2622022	Washer 4.3	6022	3454295	Bottom
6010	2013098	Screw 2.9 x 4.5 black	6023	3010007	Plastic foot
6011	3010007	Stop	6024	2039020	Screw AM3 x 5 black
6012	8700013	Battery	6025	2816189	Spring – connection
6013	2816188	Spring, short circuit	6026	3160027	Lid
6014	3010007	Plastic foot	6027	3170210	Insulating plate
6015	2380132	Square washer M3	6029	2013098	Screw 2.9 x 4.5 black

Parts not shown

3532155	Diagram
3391647	Outer carton
3397467	Foam packing, set
3917040	Foam block for pick-up arm
3917062	Foam for terminal
3627006	Cleaning brush for pick-up
3984005	Lubricant Rocol Kilopoise 1016S for lid
3950007	Plastic moulding for screen/ mains transformer
6270097	AM aerial

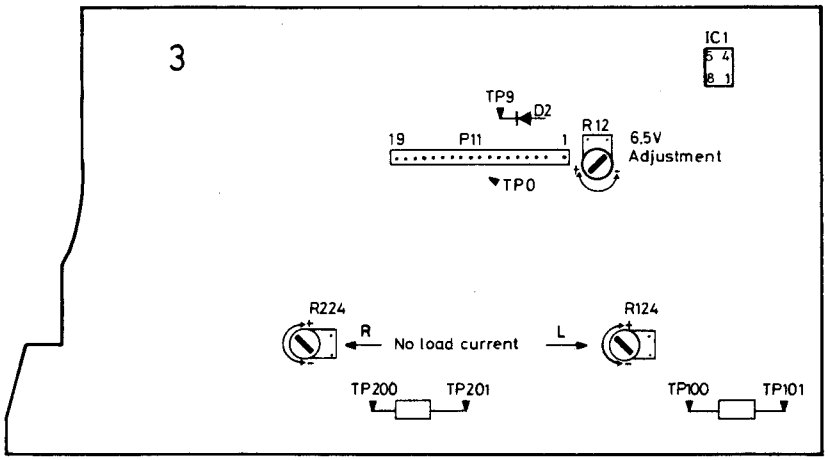
Modulpacking

Modul no.	Designation		emb. no.
03	Power	8002532	3391577
11*	Tape	8004298	3391576
17	Phono	8005084	3391574
22	Preset FM	8002531	3391574
23	AM	8002534	3391571
24	HT and Dolby switch	8002540	3391575
41	Display	8002510	3391575
42*	µC	8002588	3391575
43	Switch	8002512	3391574
44	Power back-up	8002513	3391574
45*	Remote (center)	8002514	3391574
46	Connection panel (incl. 24-25)	8002515	3391575
47*	FM	8002519	3391575

* = Packed in bag, protecting against static electricity.

ELECTRICAL ADJUSTMENTS ADJUSTMENTS RADIO SECTION

The references apply to the RH channel (the references in parentheses apply to the LH channel).



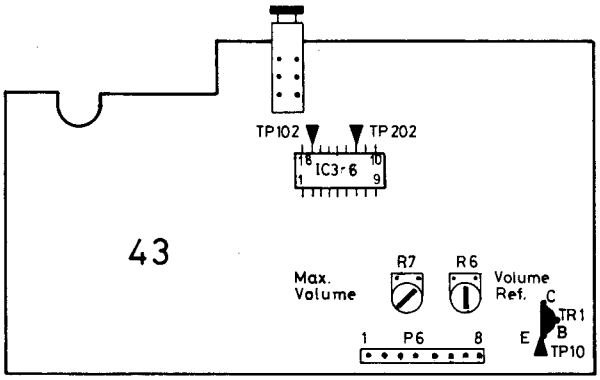
6.5 V Power Supply

Switch to ST-BY. Connect a DC voltmeter between 3TP0 and 3TP9.
Adjust with 3R12 the voltage to 6.5 V ±0.1 V.

No-Load Current

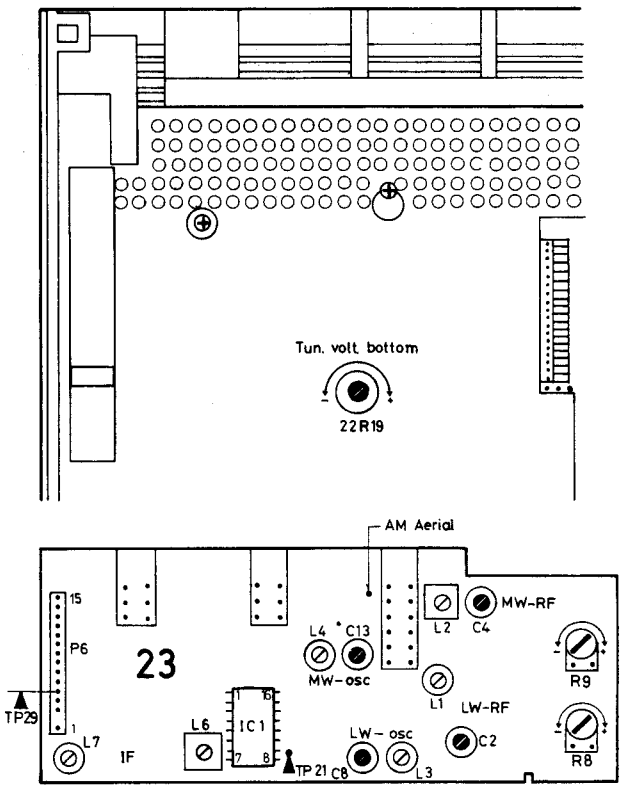
Set the receiver in P1-P5 mode.
Adjust the no-load current while the receiver is in a cold state and the volume control is fully turned down.
The loudspeakers must not be connected.
Connect a DC millivoltmeter between 3TP200 and 3TP201 (3TP100 and 3TP101).
Adjust with 3R224 (3R124) to 10 mV.
The adjustment can also be made by inserting a milliammeter in series with the collector of 3IC200 (3IC100) and adjust 3R224 (3R124) to 25 mA.

Amplification (AF)



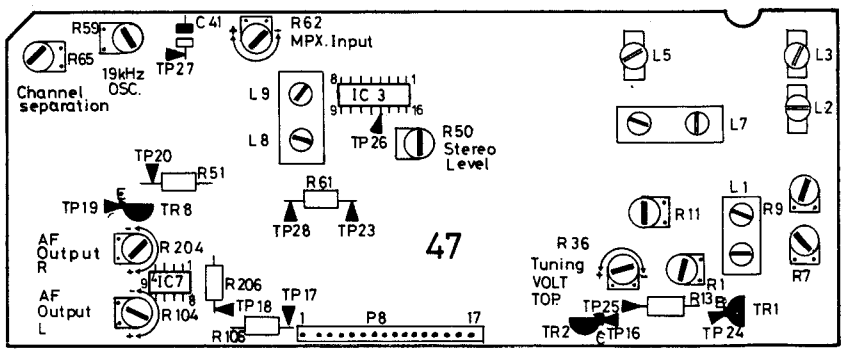
Switch to TP2.
Connect a tone generator to Tape 2 and set to 1 kHz 150 mV EMF.
Set volume control at max.
Set bass, treble and balance control in neutral position.
Connect DC voltmeter to 43TP10 (emitter of 43TR1).
Adjust 43R6 until a reading of 4 V.
Connect an AC voltmeter to TP202 (TP102). Set the balance control at equal voltage in TP200 and TP102.
Adjust 43R7 until a reading of 2.85 V.AC is obtained in TP202 (TP102).

Tuning Voltage



Set switch in MONO (AFC. OFF).
Activate P6.
Set dial pointer at 10.8 MHz.
Connect DC voltmeter to 47TP16 (collector of 47TR2).
Adjust 47R36 until a reading of 21.2 V is obtained.
Connect DC voltmeter to 47TP24.
Adjust 23R8 until a reading of 19.5 V is obtained.
Set dial pointer of the first mentioned 8 in 88 MHz.
Connect DC voltmeter to 47TP25.
Adjust 22R19 until a reading of 3.0 V is obtained.
Connect DC voltmeter to 47TP24.
Adjust 23R9 until a reading of 3.6 V is obtained.
The adjustment procedure is repeated at incorrect dial calibration.

Tuner and MF-section

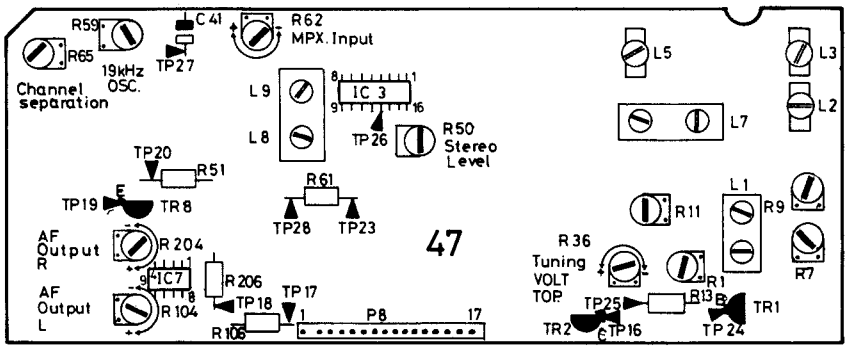


Set P6 at 87.5 MHz.

Tuner/MF

Connect an sweep generator to the aerial input and set it at 87.5 MHz.
Connect an oscilloscope to 47TP26 via an RC-probe no. 8802036.
Adjust with 47L1, 47L2, 47L3, 47L5 and 47L7 till maximum and symmetrical MF curve. (Repeat the procedure, if necessary).

The receiver and the sweep generator are now set at 108 MHz. Adjust with the potentiometers 47R1, 47R7, 47R9 and 47R11 until maximum and symmetrical MF curve.



Detector

In order to be able to make a correct adjustment of the detector, such equipment as a distortion meter as described in point 1 must be used. If a distortion meter is not available, an approximated adjustment can be made as described in point 2.

1. Set the receiver at, e.g. 94 MHz.
   Connect a combined signal generator/sweep generator to the aerial input and set it to 1 mV EMF, Δ±75 kHz.
   Connect an oscilloscope to 47TP26.
   Set the signal generator frequency to 94 MHz and to at least 2nd harmonic of the signal (see ill.).

CORRECT

INCORRECT

   Connect a distortion meter to the loudspeaker output.
   Connect a DC voltmeter between 47TP28 and 47TP23.
   Adjust with 47L9 until minimum distortion is measured.
   Then adjust with 47L8 until a reading of 0 V is obtained.
   Repeat both adjustments until they are OK.

2. The adjustment is made by means of the »S-curve« but it will be uncertain whether the receiver complies with its distortion data.

   Set the receiver to, e.g. 94 MHz.
   Connect a combined signal generator/sweep generator to the aerial input and set it to 1 mV EMF, Δ±75 kHz.
   Connect an oscilloscope to 47TP26.
   Set the signal generator frequency to 94 MHz and to at least 2nd harmonic of the signal (see ill.).

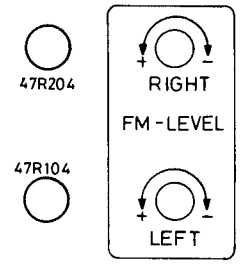
CORRECT

INCORRECT

Set the generator at sweep.
Connect an oscilloscope to 47TP27 and a DC voltmeter between 47TP28 and 47TP23.
Adjust with 47L9 and 47L8 to maximum and symmetrical S-curve.
Then adjust with 47L8 until a reading of 0 V is obtained.
Check that a reading of 21.2 V is obtained at 47TP16 (collector of 47TR2).
If not, repeat the procedure dial adjustment.

FM-AF Output

Connect a signal generator to the aerial input and set to e.g. 94 MHz and to 1 mV EMF, Δ±75 kHz.
Set the receiver at the same frequency as signal generator and in MONO mode.
Connect AC voltmeter to 47TP27 and adjust 47R62 until a reading of 0.65 V is obtained.
Take AC voltmeter to 47TP17 (47TP18) and adjust 47R104 (47R204) until a reading 0.9 V is obtained.



BOTTOM WIEV

* 47R204 (47R104) are adjustable to an output level according to the customer's wishes.

Opening of Stereo Decoder

Connect a signal generator to the aerial input and set it to e.g. 94 MHz and to 25 μV EMF, Δ±75 kHz.
Set the receiver at the same frequency as the signal generator.
Connect a DC voltmeter to 47TP20.
Adjust with 47R50 until a reading of 0.6 V is obtained.
NOTE: Channel separation will then be 10 dB (±2 dB).

Stereo Decoder

To be able to make this adjustment correctly a frequency counter or Bang & Olufsen's Voltmeter RV11 and Frequency Probe PF5 as described in point 1, are needed. If such instruments are not available, an approximated adjustment can be made as described in point 2.

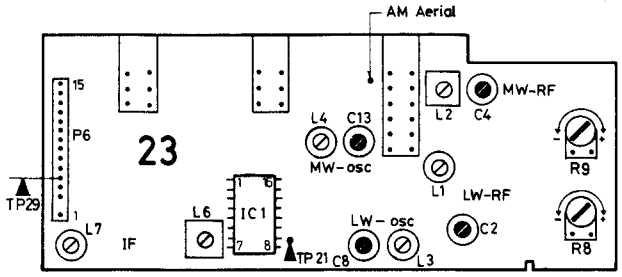
1. Solder a 220 kohm resistor from 47TP20 (the base of 47TR8) to +15 V.
   Tune the receiver to a mono station. (Switch in pos. FM auto).
   Connect a frequency counter (or RV11/PF5) to 47TP19.
   Adjust with 47R59 until a reading of 19 kHz ±50 Hz is obtained.
   After the adjustment, remove the soldered-on resistor.

2. Solder a 220 kohms resistor from 47TP20 (the base of 47TP8) to +15 V.
   Tune the receiver to a stereo station.
   Turn the potentiometer 47R59 anti-clockwise (as seen from the component side) until the stereo effect just ceases. Then turn 47R59 clockwise until the stereo effect just ceases. Now set 47R59 right between the two positions and an approximately correct adjustment has been achieved.
   After the adjustment, remove the soldered-on resistor.

Channel Separation

Connect a stereo encoder to the aerial input.
Connect a wattmeter or an AC voltmeter to the loudspeaker output.
Adjust with the potentiometer 47R65 until the maximum signal is obtained in the non-modulated channel.
47L100 (47L200) must not be adjusted.

AM-IF



Set the receiver to, e.g. MW 575 kHz. The signal from the sweep generator is applied to 23TP21 through 0.1 µF, the centre frequency 469.5 kHz Δ10 kHz (468 kHz resonance will in the coupling used give a centre frequency of 469.5 kHz).
The RF voltage necessary is approx. 10 mV (due to te IF suppression in the IC).
However, it is recommendable to stop the oscillator by connecting the 0.1 µF capacitor from pin 15 on 23IC1 to chassis, whereby the IF suppression is considerably reduced. The necessary RF level will now be 10-100 µV.
It is recommendable to use a signal as weak as possible to avoid influence from the AGC.
Connect the oscilloscope to 23TP29 (pin 6 on 23IC1). Adjust 23L6 and 23L7 until maximum and symmetrical IF curves is obtained.
Remove the oscillator stop.

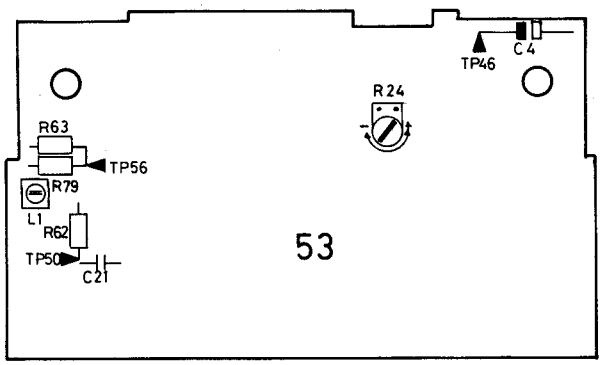
MW Oscillator and Aerial Circuits

Connect a signal generator to the aerial input via a dummy aerial, 575 kHz, modulation 30%-400 Hz or 1 kHz.
Connect a wattmeter or an AC voltmeter to the AF output.
Set the receiver to 575 kHz.
Trim the oscillator with 23L4 until the receiver is spot on the transmitter frequency. (Always use signals as weak as possible during the whole adjustment job, this will result in the most accurate adjustment).
Adjust with 23L2 to max. on the AF output.
Set signal generator and receiver to 1495 kHz.
Adjust the oscillator into position with 23C13.
Adjust the aerial circuit to max. with 23C4.
Repeat the adjustment until the dial setting is correct and the aerial circuit is in max.
Always end with 23C4.

LW Oscillator and Aerial Circuits

Set signal generator and receiver to 155 kHz.
Adjust the oscillator in position with 23L3.
Adjust the aerial circuit to max. with 23L1.
Adjust the signal generator and receiver to 285 kHz.
Adjust the oscillator in position with 23C8.
Adjust the aerial circuit to max. with 23C2.
Repeat the adjustment until the dial setting is correct and the aerial circuit is max.
Always end with 23C2.

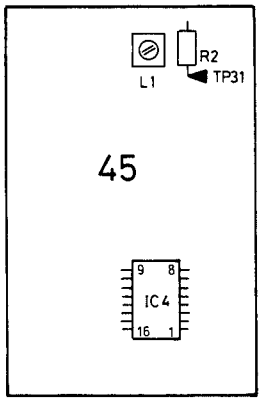
Adjustment
Remote Control



Adjust 53R24 LCD display according to the customer's requirements.

L.C.D. Night Light
Remote Control Receiver in
Master Control Panel

Adjustment of 53L1. Make a jumper from 53TP46 to function between 53R63 and 53R79.
Connect oscilloscope to 53TP50.
Activate »volume down« on the MASTER CONTROL PANEL.
Adjust 53L1 to max.



Remote Control Receiver in
Beocenter

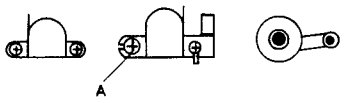
Adjustment of 45L1.
Connect oscilloscope to 45TP31.
Place the Master Control Panel indirectly against sensor.
Activate »volume down« on Master Control Panel.
Adjust 45L1 to max.

ELECTRICAL ADJUSTMENTS TAPE RECORDER

References apply to right channel (Braketed references apply to left channel).
Electrical adjustments to be made without DOLBY NR.

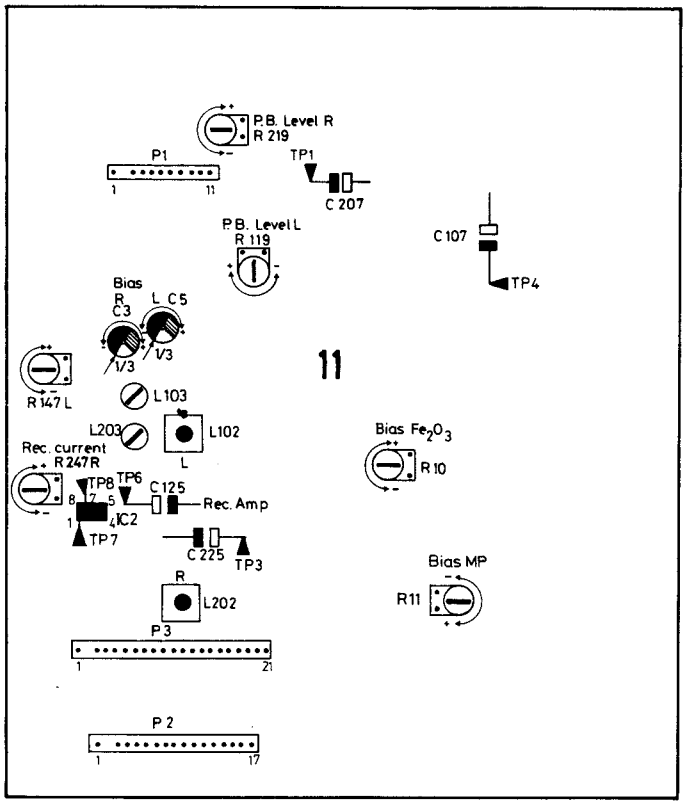
Azimuth

Demagnetise tape head and erase head.
Connect LF voltmeter to 11TP3 (11TP6).
Insert azimuth tape 6780036.



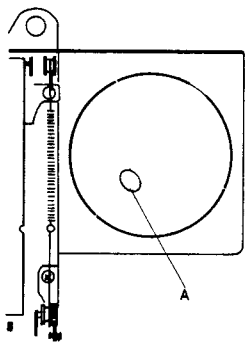
Adjust screw A for max. signal in both channels and for equal output for left and right channels (mean value 11TP3 (11TP6)).

Playback level



Insert Pegel tape 6780035 in cassette holder.
Connect LF voltmeter to 11TP3 (11TP6).
Adjust 11R219 (11R119) so that 725 millivolts is measured at 11TP3 (11TP6).

Speed



Insert wow tape 6780037 in cassette holder.
Connect wowmeter to 11TP3.
With potentiometer A in motor adjust for correct speed as read on the wowmeter's driftmeter.
Adjustment to be made in the middle of the tape.

Record Boost

Insert a CrO_2 tape.
Connect tone generator to tape input and set to deliver 333 Hz in the 1-Volt range.
Activate record pause.
Adjust record potentiometer so that 316 millivolts is measured at 11TP7 (11TP8).
Set tone generator to 10 kHz.
Adjust 11L202 (11L102) so that 1 volt is measured at 11TP7 (11TP8).

Bias filter

AF voltmeter is connected over tape head.
Activate Pause (without signal).
Adjust 11L203 (11L103) to maximum voltage, measured across the tapehead.

Bias and Record Current CrO_2

Insert CrO_2 tape 6780066.
Set 11R247 (11R147) to midscale and 11C3 (11C5) to one-third of full scale.

Record Current

Connect tone generator to tape input and set to deliver 333 Hz in the 1-volt range.
Activate record pause.
Adjust record potentiometer so that 200 millivolts is measured with AF voltmeter at 11TP3 (11TP6).
While recording and playing back, respectively, adjust 11R247 (11R147) so that 200 millivolts is measured at 11TP3 (11TP6) during both record and playback.

Bias

Set tone generator to deliver 333 Hz in 100-millivolt range.
Adjust record potentiometer so that approx. 25 millivolts is measured with AF voltmeter at 11TP3 (11TP6).
While recording and playing back 333 Hz and 15 kHz, respectively, adjust 11C3 (11C5) so that the level at 15 kHz is 1 dB higher than the level at 333 Hz (less bias gives treble boost; more bias gives treble cut).
Check record current.

Fe_2O_3 Bias

CrO_2 must be adjusted, and tone generator and potentiometer settings must be the same as for CrO_2 bias.
Insert Fe_2O_3 standard tape 6780067.
While recording and playing back 333 Hz and 15 kHz, respectively, adjust 11R10 for identical levels at 15 kHz as well as 333 Hz as measured with AF voltmeter in 11TP3.

MP Bias

CrO_2 bias must be adjusted, and tone generator and record potentiometer settings must be the same as for CrO_2 bias.
Insert MP test tape 6780059.
Activate METAL TP.
While recording and playing back 333 Hz and 15 kHz, respectively, adjust 11R11 for identical levels at 15 kHz as well as 333 Hz, measured with AF voltmeter in 11TP3.

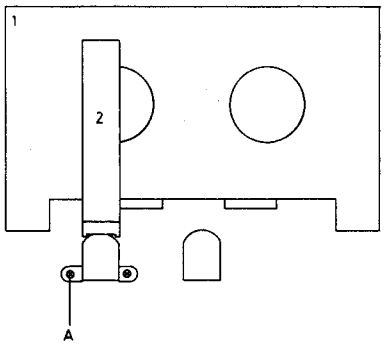
Check of Bias

The bias adjustment can be checked by measuring the 3rd harmonic distortion of 333 Hz (K_3 distortion).
The measuring can be performed with distortion meter DM1 (Bang & Olufsen).
The K_3 measurement is to be made with DM1 connected to the tape input.
Record pause is activated.
The Record potentiometer is adjusted till 725 mV is measured in 11TP3 (11TP6).
The measurements are to be performed with the standard tape mentioned in the bias adjustments.
The K_3 must lie below:

CrO_2	3%

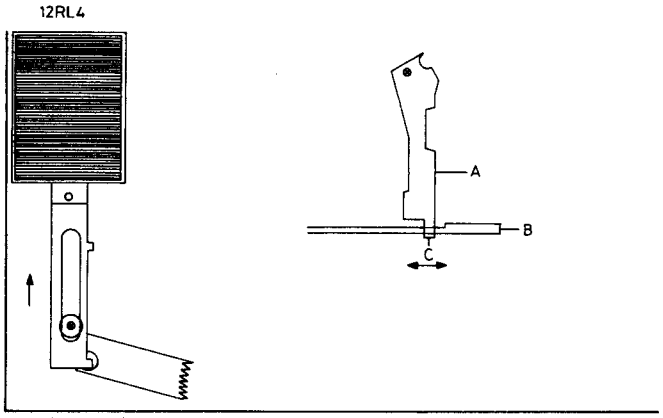
MECHANICAL ADJUSTMENTS

Erase Head Height



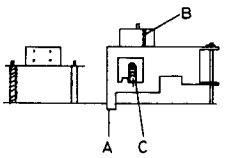
Erase head height is adjusted with adjustment tools 1 and 2 from adjustment tool kit 3624020.
Place adjustment tools in cassette holder as shown in sketch.
Carefully press tape head bridge in against tool 2.
With screw A adjust until tape guide goes in above tool 2.

Rewind



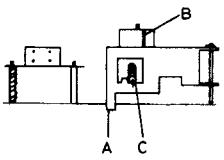
Press armature in magnet coil 12RL4 in as far as it will go.
Clearance between arm A and arm B should then be 0.5 – 1 mm. Adjustment is performed by bending the arm A so that tag C moves in one of the directions of the arrow.

Thrust Roller Free Travel



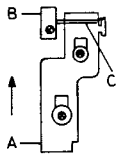
Press tape head bridge as far as it will go. Clearance between pin A on thrust roller arm and tape head bridge should then be approx. 0.5 mm.
Adjustment is performed by bending pin A.

Thrust Roller Thrust



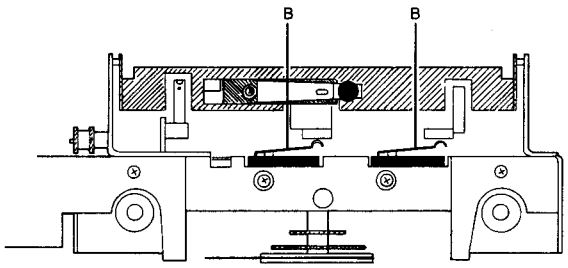
Activate play.
With spring balance at point B pull thrust roller back.
Carefully release thrust roller until it just touches the capstan shaft.
Shift spring C to one of the two notches where the spring balance reading is closest to 300 p.
Example: Spring in right-hand notch gives 280 p and spring in left-hand notch gives 330 p. Since ideal force is 300 p right-hand notch is correct adjustment.

Eject Switch



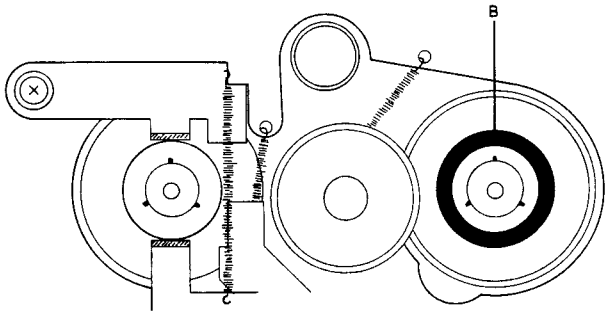
Carefully push arm A in direction of arrow, eject switch B should then open from travel of from 0.5 mm to 2 mm and before the cassette drawer releases mechanically.

Cassette Detector Record Lock



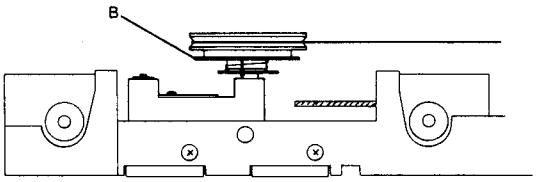
The two switches for cassette detector and record locking are bent back at the points »B« so that the switches change-over reliably when a cassette is inserted, and will change back again when the cassette is removed.

Assembler Moment



The assembler moment should be within 35/60 p/cm.
Adjustment is made by pressing the ring »B« of the assembler coil all the way down and turn it.

Coil Moment



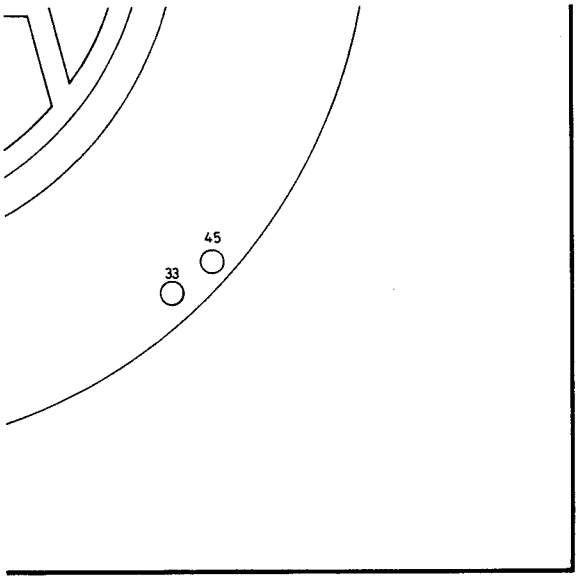
The coil moment is measured by winding forward until just before the auto stop is activated. The moment should be more than 100 p/cm.
Wind forward until end stop.
Brake to stop the motor pulley with a finger, activate forward winding, release the motor pulley slowly thus allowing the motor to start-up slowly. When the motor runs freely, read off moment. Adjustments are made by turning the disc »B«.

Lubrication

The need for lubrication is negligible, but the directions given below should be followed during overhauls and when replacing major mechanical components.

Bracket 12084: Against spring 12085. Arm 12024: Surfaces of contact against arm 12052. Balls 12037, 12059, 12061: Face slidings against leaf springs 12035, 12057, 12060, and chassis 12038. Shaft on holder 12096: Surface of contact against pulley 12097. Switch 12S4: Surface of contact against bracket 12008. Bracket 12008: Face sliding against screws 12007, 12042, and chassis 12038. Balls 12010, 12011, 12013: Face slidings against chassis 12038, and top chassis. Chassis 12038: Surface of contact against top chassis. Sensor 12065: Shaft both sides. Arms 12131, 12182: Face slidings against taps in top chassis. Pins 12130, 12201: Face slidings against top chassis. Arm 12173: Surface of contact against tap in top chassis. Bracket 12188: Face slidings against top chassis chassis 12038, against arms 12192, 12193. Arm 12192: Surfaces of contact against arms 12131, 12182. Arm 12193: Surfaces of contact against arm 12155, and angles 12199, 12200 Arm 12155: Surface of contact against arm 12173, and shaft for idler wheel 12152. Chassis 12156: Shafts for turntables 12022, 12044. Bracket 12199, 12200: All surfaces of contact.	3984022 Floil GB-TS-1
Bracket 12008: Face sliding at screw 12042. Arm 12155: Surface of contact at bushing 12154. Arm 12052: Surface of contact against chassis 12038.	3984216 Molykote (pasta G)
Bracket 12072: Surface of contact against arm 12041. Damping system 12081: All gear-wheels. Bearing 12165: Against flywheeel 12161.	3984021 Eprohon Grease

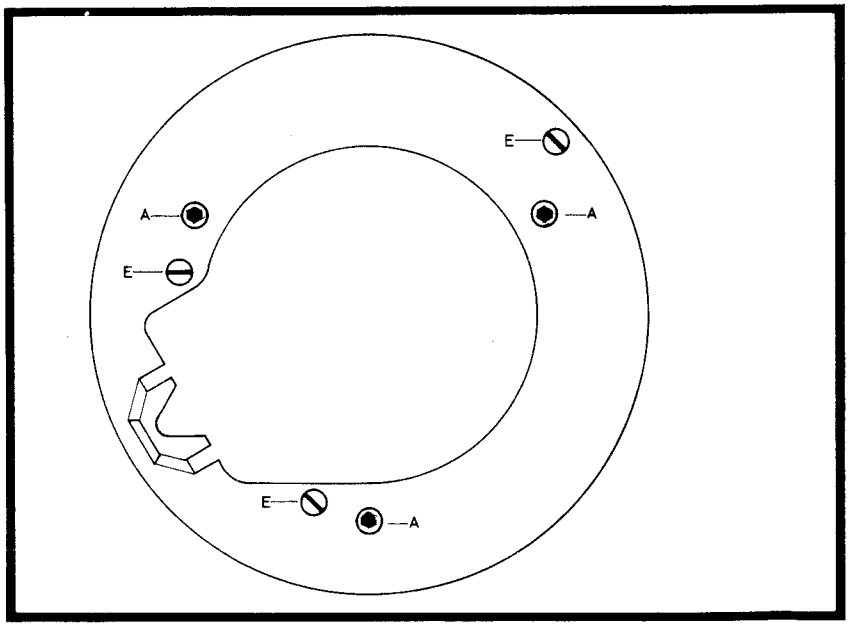
ADJUSTMENTS
RECORD PLAYER
Speed



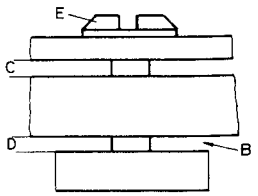
Remove the turntable so that the adjustment holes are accessible.
33 r.p.m./min. should be adjusted first. Adjust with 17R22.
45 r.p.m./min. is adjusted with 17R20.
Speed may be checked in two ways:

1. Stroboscope disc and lamp connected to the mains. This check gives an inaccuracy of approx. 2% because the 50 Hz mains frequency deviates approx. ±1 Hz.
2. Stroboscope disc and stroboscope lamp's tolerance which normally is superior to that of the mains frequency.

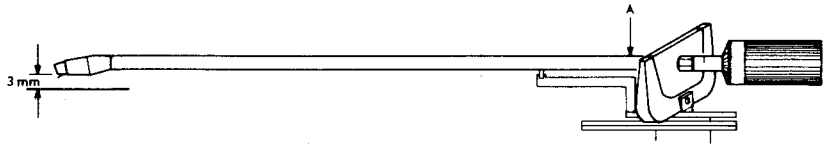
Turntable height



Place turntable and two LP records of normal weight on the chassis. The chassis should then clear all three transit bushings E (see points B).
The turntable should likewise be parallel with the chassis deck, and when the two LP records are removed from the turntable, distances C and D should be approximately identical.
Adjustments are made with screws A.

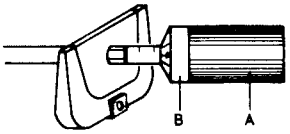


Pick-up height



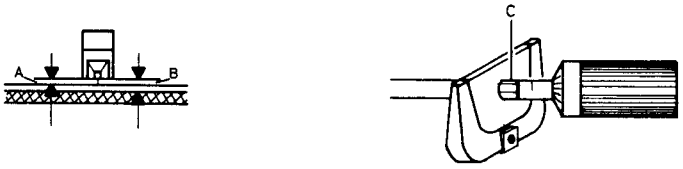
Put a record on the turntable.
Position the pick-up arm above a run-off groove.
Adjust screw A until the distance from the stylus to the record is 3 mm.
This adjustment must be made with a counterbalance weight mounted.

Pick-up arm balance



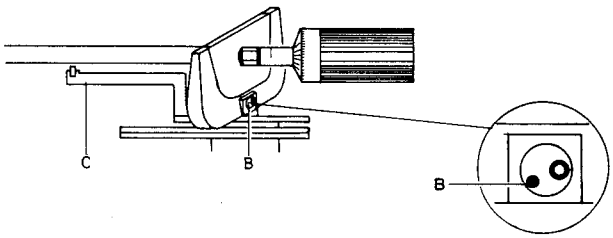
Turn the counter-balance weight until pick-up arm is in balance.
Hold the counter-balance weight in this position and zero the dial B.
The counter-balance weight A is turned clockwise until the dial B shows the stylus pressure required (for MMC 4 – 1.2 g).

Pick-up arm parallelism



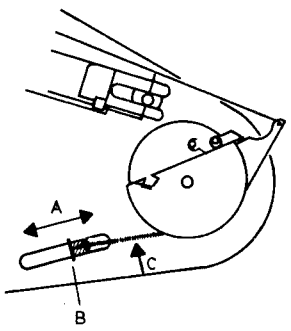
Loosen the screw C and turn the pick-up arm until the A and B clearances are equal and the straight section of the pick-up is parallel to the topside of the record.

Pick-up arm lowering



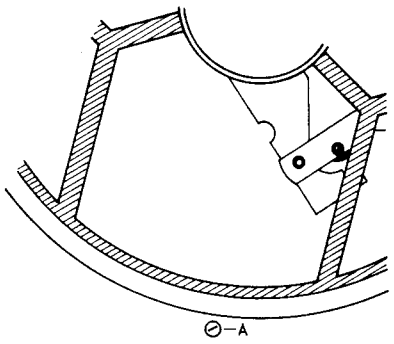
When playing a record the tap B is adjusted so that the pick-up arm positively clears the holder C.

Antiskating



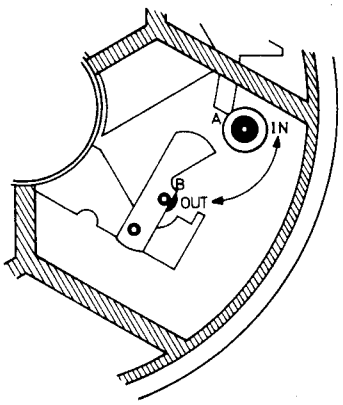
Put the test record 3621045 on the turntable.
Set stylus pressure to 1.2 grams with MMC 4.
Play cut 1.
Connect an oscilloscope to the RH and LH channels.
Push stud B in either direction of the arrow A until there is an equal distortion in both channels (for LH channel distortion, slacken spring C, tighten for RH channel distortion).

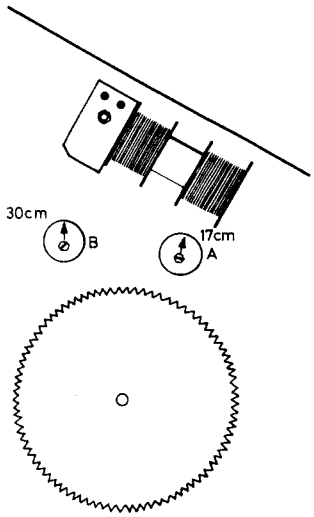
Automatic record-size mechanism



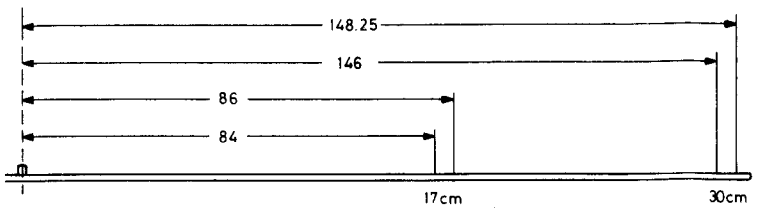
Take off turntable.
Place 60-gram weight on centre adaptor (60-gram and 20-gram weight kit 3624024).
Start turntable.
The centre adaptor should then be capable of lifting the weight, and the pick-up arm should travel in to 17-cm lowering.
Adjustment can be made with screw A. Turn screw A anticlockwise for greater lifting power and clockwise for less lifting power.
Place weights of 60 and 20 grams on the center adaptor.
Start turntable.
The centre adaptor should then be incapable of lifting the weights, and the pick up arm should travel in to 30-cm lowering.
Adjustment should likewise be made with screw A.

Pick-up arm lowering

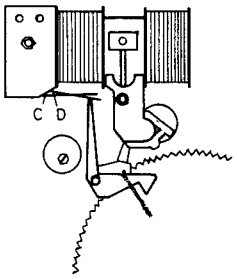




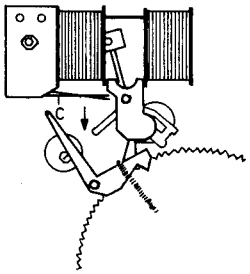
Pick-up arm lowering can be adjusted both from above and from below.
The adjustment described here is made from above.
Take 60-gram weight on centre adaptor.
Start turntable.
With eccentric A adjust until pick-up arm lowers inside the field marked 17 cm in the accompanying drawing.
Place 60- and 20-gram weights on the centre adaptor.
Start turntable.
With eccentric B adjust until the pick-up arm lowers inside the field marked 30 cm in the accompanying drawing.
When making the adjustment from below, a single record (17 cm) and an LP record (30 cm) may be used instead of weights.



Motor switch (15RL1)



When the Motor switch is open (the armature of the mechanical relay in its mid-position) the cleareance between the C and D sections of the switch should be approx. 1 mm. This is adjusted by bending the D-section of the switch.



When the Motor switch is closed, the C-section of the switch should press at approx. 15 p in the direction of the arrow.
This is adjusted by bending the C-section of the switch.

TECHNICAL SPECIFICATIONS

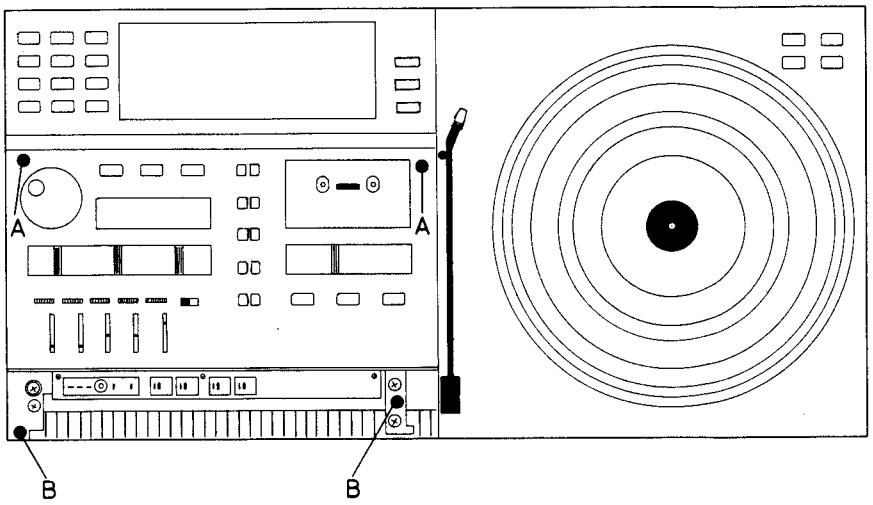
	BEOCENTER 7700	
	Type no.	**1811**
Amplifier	Power output RMS DIN	2 x 40 watts/4 ohms
		2 x 30 watts/8 ohms
	Power output 20-20,000 Hz	2 x 30 watts/4 ohms
		2 x 25 watts/8 ohms
	Harmonic distortion -26 dB	<0.1%
	Harmonic distortion	<0.1%
	Intermodulation	<0.3%
	Frequency range ±1.5 dB	20-30,000 Hz
	Power bandwidth	10-50,000 Hz
	Damping factor	>25
	TAPE 2 input	150 mV/470 kohms
	Microphone input	0.1 mV/470 ohms
	Signal-to-noise ratio phono	>82 dB
	Signal-to-noise ratio tape	>82 dB
	Channel separation 1000 Hz	>50 dB
	250-10,000 Hz	>35 dB
	Headphones output	Max. 20 V/200 ohms
	TAPE 2 output (FM ±40 kHz)	500 mV/1 kohms
	Bass control at 40 Hz	±11 dB
	Treble control at 12,500 Hz	±11 dB
FM	FM range	87.5 – 108 MHz
	FM aerial impedance	75/240 ohms
	FM sensitivity stereo 46 dB	<25µV/75 ohms
	Frequency range ±1.5 dB	20-15,000 Hz
	Harmonic distortion	<0.4%
	Stereo channel separation	>35 dB
AM	LW range	147-320 kHz
	MW range	520-1610 kHz
	Sensitivity LW 20 dB	<100µV
	Sensitivity MW 20 dB	<80µV
Record player	Pickup	MMC 4
	Stylus	Elliptical diamond
	Radius of curvature	6 x 17µm
	Frequency range	20-20,000 Hz ±2.5 dB
	Channel separation 1000 Hz	>22 dB
	50-15,000 Hz	>17 dB
	Channel difference	<2 dB
	Recommended stylus pressure	12 mN/1.2 gram
	Compliance	25 µm/mN
	Effective tip mass	0.4 mg
	Sensitivity mV/cm/sec.	>0.6 mV/47 kohms
	Output 5 cm lateral	>2.12 mV/47 kohms
	Tonearm	Radial
	Antiskating	Integrated
	Stylus pressure range	0-2 gram
	Speeds	33-45 rpm.
	Wow and flutter, DIN	<±0.09%
	Wow and flutter, WRMS	<±0.045%
	Rumble weighted	>65 dB
	Rumble unweighted	>45 dB
	Speed deviation	<0.5%
	Motor	Servo controlled DC
Taperecorder	Compact cassette	C60-C90
	Tapehead	Sendust
	Noise reduction	Dolby B
	Tape switch	Aut. ferro/chrom, manual metal

Wow and flutter	<±0.15%
Speed deviation	<±1.5%
Fast forward and rewind C60	70 sec.
Frequency range chrom-metal	30-16,000 Hz ±2.5 dB
Signal-to-noise ratio	
Metal Dolby NR	>66 dB
Chrom Dolby NR	>64 dB
Ferro Dolby NR	>62 dB
Metal	>59 dB
Chrom	>57 dB
Erasure	>70 dB
Power supply	110-130-220-240 volts
Frequency	50-60 Hz
Power consumption	20-250 watts
Dimensions W x H x D	72 x 9.5 x 38 cm
Weight	16.5 kg

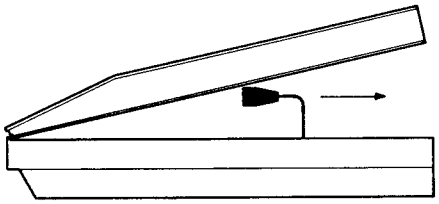
Other data

Subject to change without notice

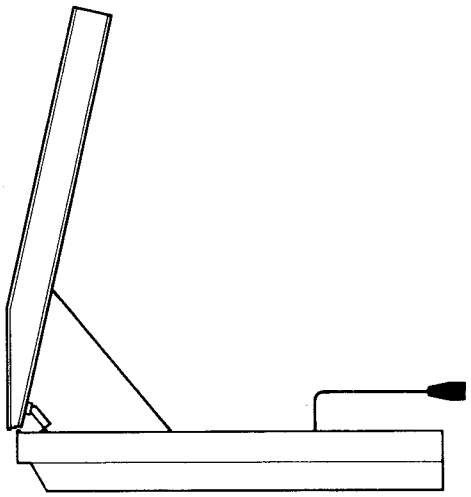
DISMANTLING
Operation section



Remove screws A and B. Lift the back edge of the unit approx. 10 cms (4") and disconnect the internal connections for loudspeakers and aerial.

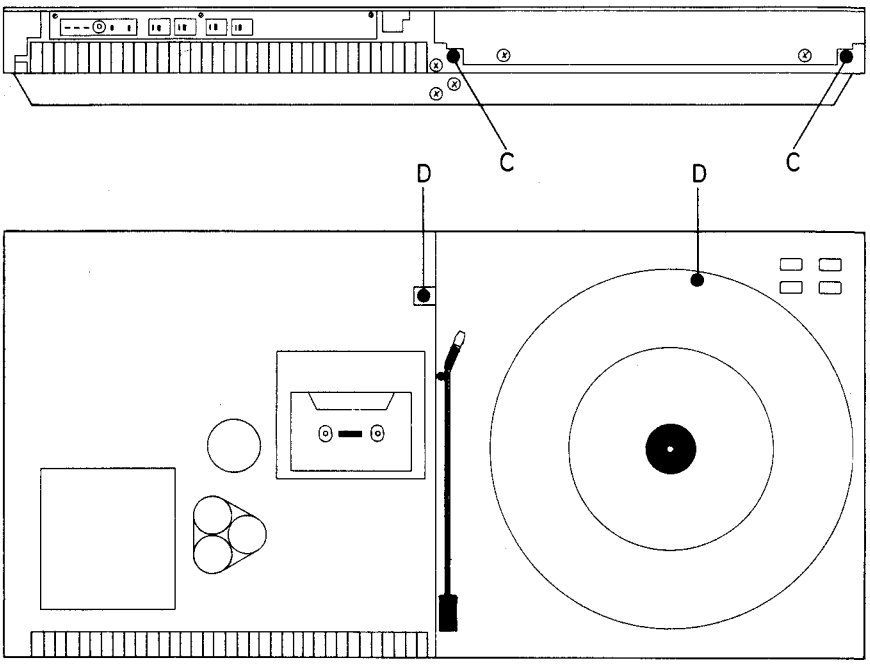


The operation chassis can now be lifted into servicing position on the support mounted on the inside of the cabinet.



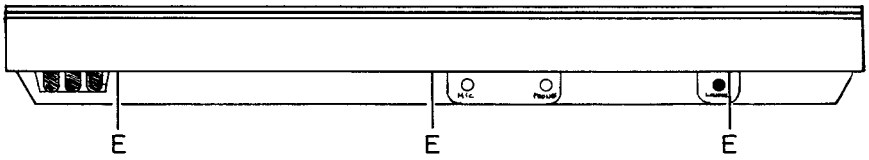
The loudspeakers can be connected direct to the wires from the output amplifier.

Record player section



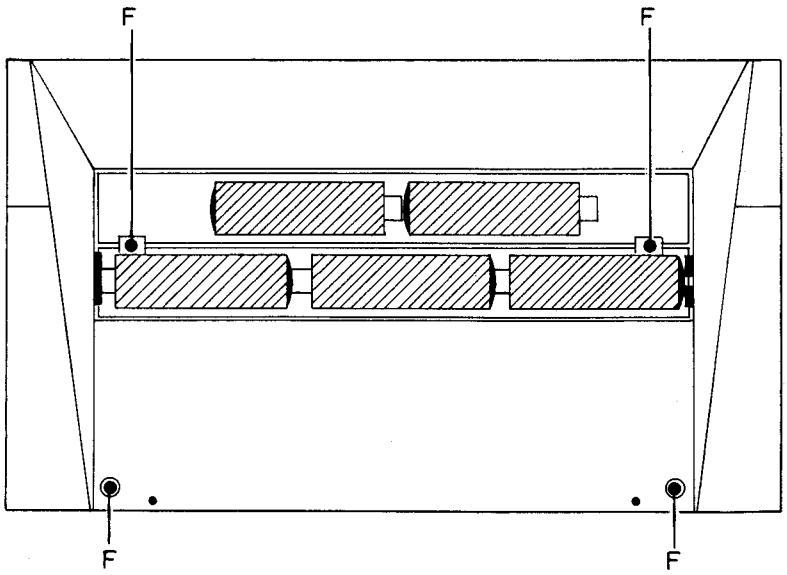
Remove screws C and D when the operating section has been lifted into servicing position. Now lift the back of the record player into servicing position just like the control section.

Removal of the front rail



Remove the 3 screws E (2.5 mm Allen-type), and the rail can be lifted off.

Master Control Panel



Remove the battery cover and take out one battery from the top row. Remove the 4 screws F, and the panel bottom can be removed.

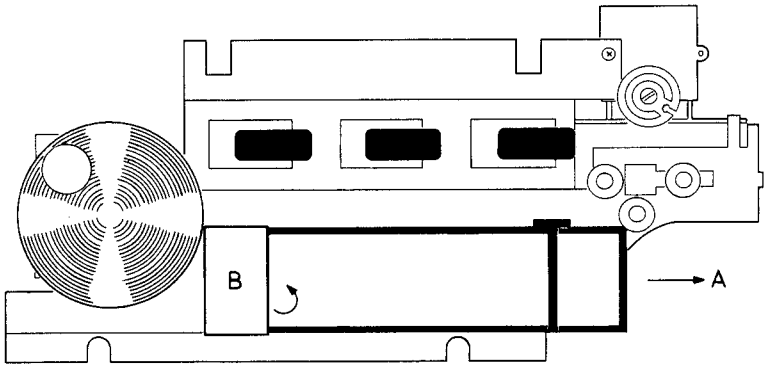
SERVICE TIPS AND MODIFICATIONS

Measurement of defective output amplifier

Should a fault arise in an output amplifier resulting in DC on the loudspeaker output, the fault switch circuit will put the set in STAND-BY. The connected loudspeakers must then be disconnected and the set can now be turned on and measurements be made unless there is a direct short-cirucuit in the output transistors.

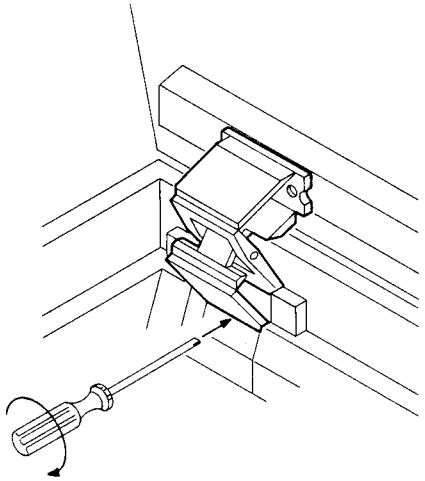
Replacing dial lamp

The AM module is removed. The dial housing is pushed in the direction of the arrow (A). The cover (B) can now be opened and the lamp replaced.



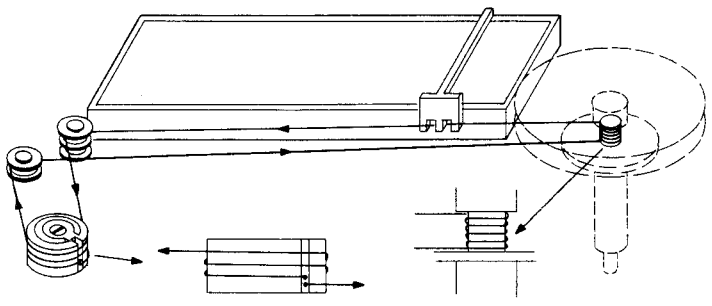
After replacement the dial housing is pushed back into its original position.

Removal of servicing hinges



If removal of the operation chassis and the record player chassis is required, the hinges can be removed by twisting with a broad and strong screwdriver under the hinge.

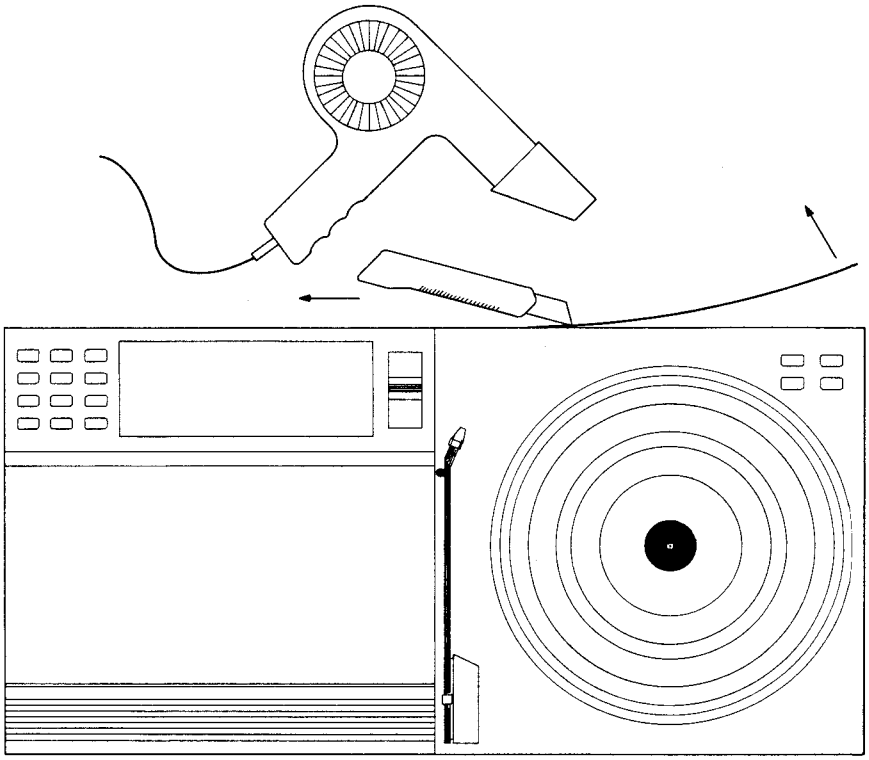
Dial drive



Dial cord (index no. 3955016) is cut off at a length of approx. 60 cms (23½") and knotted at both ends with 55 cm (21¾") between the knots. The tuning capacitor is turned counter clockwise and the cord is fitted as shown in the drawing.

Cabinet repairs and panel replacement

The cabinet kit consists of a set of veneer panels with a back coat of self-adhesive tape and protective paper.



The easiest way to remove the old panels is to heat them with a hot air blower (hair drier) and slowly to peel the old veneer panels off. It is advisable to follow with a Stanley-type knife along the edge of the foam chassis while peeling the veneer off.
If the adhesive coat is intact after panel removal the new panels may be fitted direct on top of the old coat of adhesive. If, however, the old coat is rough it must be removed with benzine prior to the fitting of the new panels.
The side panels must be stuck on first and in such a way that they flush with the front edge. The front panel must be stuck on so that one corner fits the side panel after the mounting, the second corner must be cut flush by using a **sharp** Stanley-type knife or a mortise chisel.

Wow frequencies

Frequency	Source of failure	Pos. no.
1,1 Hz	Thrust roller	12049
1,3 Hz	Take-up reel	12044
4,3 Hz	Drive belt	12162
4,5 Hz	Take up belt	12140
5,2 Hz	Idler wheel	12041
6,0 Hz	Flywheel	12161
11,8 Hz	Cluth	12135
36,5 Hz	Pulley	12101

TEST ROUTINE FOR MICROCOMPUTER

The microcomputer has a built-in programme for auto testing. The programme is being activated by activation of the ST. BY button on the set, and will keep ST. BY activated while the RECORD button is being activated. If the Microcomputer is OK, the second digit of the digital display will read 0, and the program display will read P. If, however, there is a fault situation, the display will be displaying a number or symbol together with a P (see below table).

0P	=	Microcomputer OK
1P	=	RAM defective
2P	=	ROM defective
3P	=	Pins 3-4-5-6* LOW
4P	=	Pins 3-4-5-6 HIGH, pin 37 LOW
5P	=	Pins 24-25-34-36 LOW
6P	=	Pins 35-36 HIGH
7P	=	Pins 37 HIGH, pin 14 LOW
8P	=	Pins 8-9-10-11-12-14-15 HIGH
9P	=	Pins 26-27-28 LOW
cP	=	Pins 26-27-28 HIGH
EP	=	Pins 34 HIGH
LOW	=	Short circuit to chassis in the Microcomputer or in the connected components (interface) on one of the pins mentioned
HIGH	=	Short circuit to +5 V in the gate circuit of the Microcomputer or in the connected components (interface) on one of the pins mentioned.

*) If a fault situation is present on this pin, the P in the display will disappear.

Cancellation of fault indication on the display

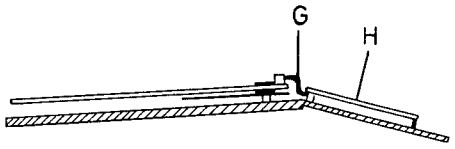
After appox. 20 sec. the display will automatically cease to display. It can be turned off before the 20 sec. have elapsed by activation of one of the buttons in the centre vertical row on the primary keyboard.

FAULT-FINDING IN THE MASTER CONTROL PANEL

Due to the short transmission times it may be difficult to make measuring of the Master Control Panel. The following service hints are offered:

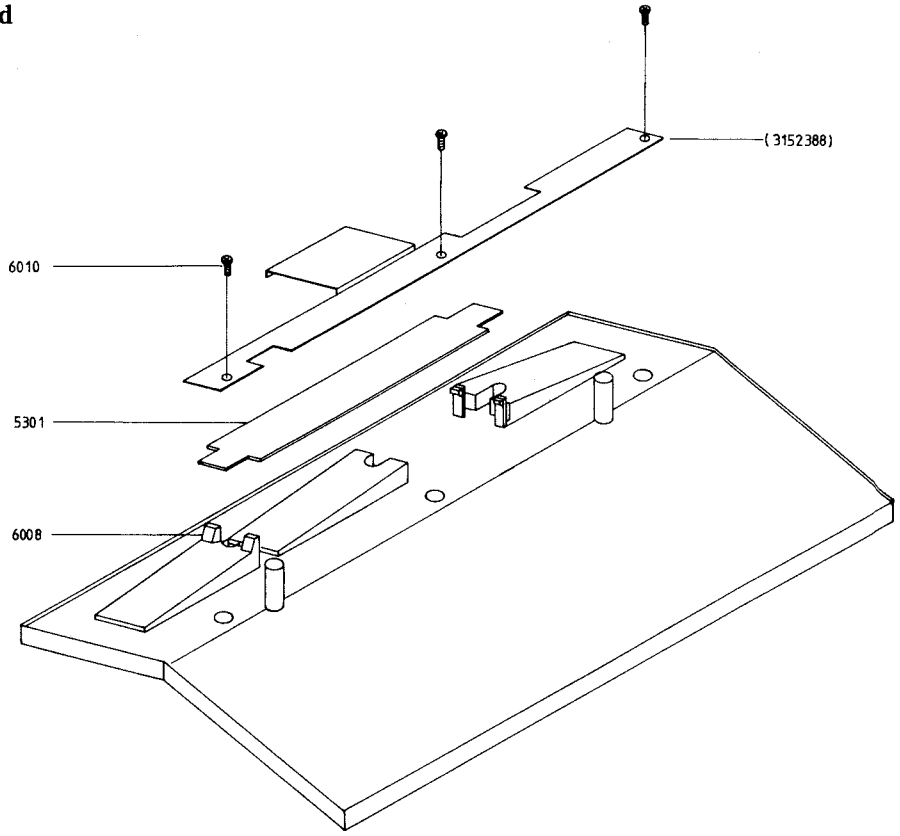
1. Measuring in the control circuit and the IR-transmitter:
   Keep volume-down constantly pressed.
2. Measuring on the IR-receiver:
   Short circuit pin 13 on 53IC4 to chassis and lift 53R44. Keep volume-down constantly pressed.
3. When checking the signal (40 Hz) from the LCD-drive 53IC2 to the LCD-display, the backplane (pins 23-24 on 53IC2) must always be used as reference.

Replacement of Display in Master Control Panel



When the bottom has been removed, then remove the flex PC (G) and the plug on the main PC (PC53), and lift up the main PC (it is held by rubber bushings only). Remove the cardboard liner and the 3 screws holding the light conductor H can now be removed. After removal of the light conductor there is free access to all LCD displays. Always keep the contact surfaces between LCD display, contact rubber and flex PC clean and free of dust and grease. Clean the contact surfaces with isopropyl alcohol.

Changed Attactment of PC Board with Transmission Diodes and Display Light in Master Control Panel

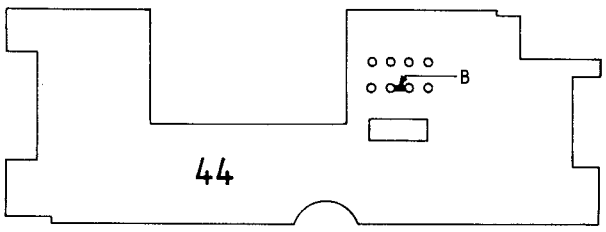


The attactment of the PC board with transmission diodes and display light (pos. 5301) has been changed shortly after productionstart.

The PC board (pos. 5301) was at productionstart fastened by plastic clips on the light emitter (pos. 6008). The attactment has been changed so that the PC board is attacted by a bracket (index no. 3152388) which is fastened with the three screws pos. 6010.

The three washers pos. 6009 are omitted at the same time.

Mic. Amplifier



In the sets first produced approx. 1000 units, the left and right channels are placed together in the circuit board at the female jack-socket.
When using the mono microphone this may result in a short circuit of the signal to chassis in the microphone's jack-plug. In order to avoid this the circuit board is disconnedted in point B.
Furthermore the problem can be solved by mounting a stereo jack-plug on the microphone.

14M1

The pulley of 14M1 is glued from the factory.
If the glued pulley gets loose it is not necessary to replace the motor. A pulley with threaded hole and threaded pin are available for fastening of the pulley.

Pulley	2722026
Threaded pin	2070400

INSULATION TEST

Each set **must** be insulation tested after dismantling. The test is to be performed when the set has been re-assembled and is ready for delivery to the customer.

Insulation test for Beocenter 7700

Make the insulation test as follows:
Short-circuit the two plug pins of the mains plug and connect one of the terminals of the insulation tester. Connect the other terminal of the insulation tester to the chassis pin of one of headphone sockets.

N.B.!
To avoid ruining the set, it is essential that both insulator test terminals are in really good mechanical contact.

Now turn slowly the voltage control of the insulation tester until a voltage of 1.5 – 2 kV is obtained. Hold it there for 1 second, then turn slowly the voltage down again.

At no point during the testing procedure any flash-over are permissible.

Bang&Olufsen

FINAL TESTING

By following the below instructions all equipment functions are tested. The sequence in below table **must** be adhered to.

Pre-setting:
Activate FM-button
RECORD LEVEL 4-5

OPERATION	FEEDBACK		
PUSHBUTTON operation	**DISPLAY**	**INDICATORS**	**MECHANICAL REACTION**
Connect to mains	: (ST. BY COLON)		
Set clock ⇒ 1 ⇒ OK	00:00 00:01 ⇒ : (digits flashing)		
COUNTER/ CLOCK ⇒ COUNTER/ CLOCK	00:01 ⇒ :		
STORE VOLUME	After 1 sec. 2:8 , After 3 sec. :		
DISPLAY VOLUME	Immediately 2:8 , after 2 sec. :		
(Insert prerecorded tape Record inhibited). COUNTER ADDRESS ⇒ 4 times 8	000 TPI ⇒ 8888 TPI		
RECORD OPEN	2 times ⊔⊔⊔⊔ then 8888 TPI		
∧ ⇒ RESET ⇒ ∨	30...32⇒28⇒26...24		
MUTE		MUTE	
ST.BY	:		
P1 till P6	Time from connection e.g. 00:02 P1...P6	At P6 frequency scale lights	
METAL TAPE		METAL TAPE	

(Insert tape for recording) RECORD OPEN ⇒ RECORD	Time from connection P6 0000 P6	RECORD OPEN ⇒ READY FOR RECORD-ING, PPM scale lights, deflection on PPM	
RECORD ⇒ STOP	Tape counter ⇒ 0000 for approx. 4 sec., then tape counter	RECORDING ⇒ READY FOR RECORD-ING	> ⇒ > for approx. 4 sec. then STOP
TP2 ⇒ TP1	Tape counter TP2 ⇒ tape counter TP1	READY FOR RECORD-ING ⇒ RECORD OPEN	Stop ⇒ >
≪ ⇒ RETURN	Tape counter⇒ 0000 then tape counter	RECORD OPEN	≪ ⇒ runs to point for activating TP1 then >
≫ till tape run-out ⇒ COUNTER RESET	Tape counter ⇒ 0000	RECORD OPEN	≫ stops at tape run-out
(Place a 17 cm record on turn-table) PH	Time from connection PH		Turntable rotates, PU-arm goes to 17 cm set-down and lowers, speed 45 r.p.m.
33 ⇒ 45 ⇒ STOP ⇒ TURN			33 r.p.m. ⇒ 45 r.p.m. ⇒ stop, PU-arm returns to stop position ⇒ turn-table rotates, PU-arm in stop position
TIMER 1	00:00 (the two first digits are flashing)		
TIMER 2 ⇒ 1	00:00 ⇒ 00:01 (the two rear digits are flashing)		
OK	00:00	PROGRAMMED	

Connect:

Aerial
4 x loudspeaker
Headphone
Other tape deck to TAPE 2

Make: Listening test on all programmes as well as dial calibrations.

Record/replay listening test on tape deck with and without Dolby NR.

Listening test on gramophone.

Test balance (channel identification), bass, treble, loudspeaker switches, FM AUTO-MONO, LOUDNESS and dust cover light.

Test microphone connection.

MASTER CONTROL PANEL (MCP)

Activate MCP functions one by one at a distance of approx. 1 m from the Beocenter 7700.
MCP display will indicate chosen function for approx. 6 sec. after activating the function if Beocenter 7700 accepts function. If function is not accepted, the MCP display will indicate function for approx. 1 sec., and then the actual function for approx. 4 sec. If the MCP does not receive reply from the Beocenter the display will shortly indicate the chosen function followed by NO TRANSMISSION for approx. 6 sec.
The display indicates same symbols as buttons, however with the following exceptions:

BUTTON	DISPLAY
ST. BY	□
STOP	≪ ≫
RETURN	≪
RESET	◇
STATUS	The actual function

NB! INT. REMOTE ON/OFF button must be set in same position as at delivery of the set from the customer.